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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND CERTAIN INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1983

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

SECOND SESSION

ON

H.R. 6956

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND FOR SUNDRY INDEPENDENT AGENCIES, BOARDS, COMMISSIONS, CORPORATIONS, AND OFFICES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1983, AND FOR OTHER PURPOSES

PART 3 (Pages 1537-2212)

NONDEPARTMENTAL WITNESSES

Printed for the use of the Committee on Appropriations

U.S. GOVERNMENT PRINTING OFFICE
16-312 O WASHINGTON : 1983

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

S181-22

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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT-INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1983

MONDAY, MAY 24, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1224, Everett McKinley Dirksen Senate Office Building, Hon. Jake Garn (chairman) presiding.

Present: Senators Garn and Proxmire.

NONDEPARTMENTAL WITNESSES

SUBCOMMITTEE PROCEDURE

Senator GARN. The subcommittee will come to order.

This morning we begin the first day of 2 days of public witnesses. Since March 4, we have been taking testimony from the various agencies under the jurisdiction of the subcommittee. As a result of those 12 days of hearings, we have built a record as to the administration's policy and budget request on literally hundreds of programs.

Between now and tomorrow evening, we will hear from 60 individuals and organizations who are taking their time to share their thoughts on how these programs might be improved and, hopefully, how we can increase the program benefits while containing the program costs. Most of the witnesses are in an excellent position to advise us in these matters since they are on the receiving end of the programs and can separate what is intended from what is actually being done.

In the past, I have found the testimony presented at the public witness hearings to be of great value in the subcommittee's deliberations. As in the past, I have instructed the staff to carefully review the literally hundreds of pages of testimony that have been submitted by our public witnesses and prepare abstracts of the major issues that are raised.

Because of the sheer volume of material that we have to cover, I will have to ask each witness to confine their presentation to 5 minutes. This will give members of the subcommittee time to ask any questions. I will, of course, place the entire statement of all of the witnesses in the record.

Before beginning, I would really like to thank Cathy O'Connor of the staff for her superhuman effort. It is not an easy task to try to put together a witness list of 60 people for 2 days of hearings. She really has worked very hard in coordinating these 2 days of hearings.

I would first like to call Herman Will, Jr., legal counsel for the National Interreligious Service Board for Conscientious Objectors.

SELECTIVE SERVICE SYSTEM

STATEMENT OF HERMAN WILL, JR., LEGAL COUNSEL, NATIONAL INTERRELIGIOUS SERVICE BOARD FOR CONSCIENTIOUS OBJECTORS

Mr. WILL. Thank you, Mr. Chairman.

As you know, because you have it in hand, I have prepared an abbreviated version of the testimony in order to conform to the time limitation.

Senator GARN. I am sorry we have to confine everybody with such a brief period of time. You can imagine how many days—weeks—it would take if we did not.

Mr. WILL. We appreciate this opportunity to appear and express our concerns, even though the time is limited.

I am Herman Will, an attorney and long-time national staff person of the United Methodist Church, as well as a member of the Consultative Council of National Interreligious Service Board for Conscientious Objectors. I was a conscientious objector during World War II and served as the administrator of a small rural hospital and public health project in Puerto Rico throughout the war.

NISBCO, as I shall call it, is a nonprofit service organization formed by several denominations in 1940 to respond to the problems of conscientious objectors under the draft. Today, it includes a wide range of representatives of Catholics, Jews, and Protestants. A list of the members of the board of directors is attached to the longer testimony. In addition to providing information and nondirective counseling services to conscientious objectors, NISBCO is concerned with Government policies that affect objectors.

One of the areas of interest is the present planning of Selective Service for an alternative service program for those objectors who are opposed to all military service in a period when inductions would be occurring. NISBCO is concerned that alternative service should be provided that is consistent with the beliefs of conscientious objectors and of genuine benefit to society as a whole.

Frankly, we are troubled with the alternative service program plans of Selective Service which have been developed since the fall of 1980, and we have expressed these concerns both in person and in writing and we made specific suggestions for change. Here, in summary form, are some of our criticisms.

As current plans read, alternative service placements would be made by Selective Service, together with FEMA, the Department of Labor, and other agencies, prioritized in terms of civilian support of military needs. There is no guarantee that persons would not be assigned to work that would violate their consciences because of its relation to a war effort.

Second, as the plans now read, only after mobilization priority jobs were filled would conscientious objectors be allowed to request approval on an individual basis for work in a specific job or with a service agency offering qualified employment. This would mean a greatly increased bureaucracy in terms of number of assignments handled by Government agencies and might make it impossible for an objector to serve in a hospital, relief project, or a home for children or the aging, particularly projects sponsored by religious agencies. With religious agencies sponsoring hundreds of such hospitals, homes, and projects, all of which would be short of workers in the event of mobilization, many thousands of conscientious objectors could be directly assigned to the service programs of those religious agencies and promptly and efficiently placed, as was done throughout the war in Viet Nam.

Third, while religious service agencies are quite prepared to accept conscientious objectors other than members of their own group in an alternative service program, there would be little incentive for them to greatly expand their present programs unless they can be assured that many of their own members would be among those assigned. This is especially true of the historic peace churches and other religious groups which maintain closely knit communities and wish to maintain contact with their objectors.

Finally, the alternative service program is to provide "civilian work," and during World War II the law stated it was to be "under civilian direction." It appears that at the present time the personnel administering the proposed program will be largely military reservists or retired military. This will certainly present a problem of conscience for some objectors, and it seems unwise in an area where the problems are numerous in any case.

A further word about efforts to communicate these concerns to Selective Service is in order. NISBCO has always believed in open dialog with Government agencies and, in the past, has had many contacts not only with Selective Service, but also the Department of Justice and the Department of Defense. When Selective Service published its paper in the Federal Register in January 1981 for public comment, there was strong criticism from many of the religious groups. A study of the public comments revealed 53 of the 62 comments that came in expressed doubts as to fairness and appropriateness of the plan. Selective Service summarized these responses and made its own answers, but really failed to respond to the expressed needs by making any significant changes in its plans. And as of February 4 of this year, we have been assured that this concept paper still is the basis on which they are proceeding.

So, in summary, the program that Selective Service is now developing does not have the support of the concerned constituency that it would actually affect. The great majority of conscientious objectors are quite prepared to perform meaningful and productive work under civilian director in an alternative service program.

We believe that with serious and open dialog an alternative service program which respects the consciences of sincere objectors could be developed. We further believe that reliance on the initiative of many objectors and on the great opportunities for needed and important work in the service programs and institutions of the religious community in our Nation could result in more decentralization, less bureaucracy, and greater efficiency in such an alternative service program.

So, the best thing we can decide to do at the present time is to ask Congress not to provide additional funds for alternative service until a more appropriate and viable program is formulated by Selective Service. Specifically, we are asking the members of this subcommittee to delete all funds in the Selective Service fiscal year 1983 budget and the fiscal year 1982 supplemental request designated for development of the proposed alternative service program. This would involve two items: $248,000 and $50,000 in the fiscal year 1983 budget request and $122,000 in supplemental budget requests for 1982. We have detailed those points at greater length in the longer testimony that we have submitted.

I would just make two brief comments. There is an interesting comment in the conference report on Public Law 92–129, which amended the Military Selective Service Act in 1971. The Senate conferees accepted certain amendments with the understanding that the Director of Selective Service may draw heavily on the experience and the recommendation of the local boards and State directors in assigning conscientious objectors to alternative service, and that local arrangements under which alternative service is now performed in religious and other organizations will not needlessly be disrupted. So it was a concern at that time of the conference committee that the present arrangements as they existed during the Viet Nam period be preserved.

A final comment. There is a letter attached in the supplementary material that is attached to the longer material from Charles Boyer, addressed to James Bond, then Acting Director of Selective Service, dated September 27, 1981, which sets forth in more detail the concerns of our body.

Thank you.

Senator GARN. Thank you, Mr. Will. I am just a little puzzled by your request. On the one hand, you say you want a more appropriate and viable plan. I am not here to argue that with you one way or the other. However, in the next sentence you ask that all funds be deleted for development of that plan. I understand your concern. You would like it different than it is. But I don't know how you get from here to there, develop a new plan, if you delete all of the funds. It would seem to me it makes a great deal more sense to continue to try to develop that plan than wait until there is some sort of emergency and then put it together in a rather hurried manner, which does not usually meet the needs of conscientious objectors.

Mr. WILL. Mr. Chairman, our thoughts do not run counter to your comments. There are some funds already in the appropriation with which Selective Service has been working in doing their planning. The present funds we are talking to would move the program in these directions about which we expressed concern. So it is an attempt to secure cooperation, if we can, from your subcommittee to get Selective Service to reopen the question and take another look at it. And we don't know how else to proceed than to suggest these funds be deleted as a way of encouraging Selective Service to move in that direction. There may be other things you and your subcommittee could do, but that would be a matter for your judgment.

Senator GARN. Thank you very much. We appreciate your testimony.

Mr. WILL. Thank you.

[The statement follows:]

STATEMENT OF DR. HERMAN WILL, MEMBER, CONSULTATIVE COUNCIL, NATIONAL INTERRELIGIOUS SERVICE BOARD FOR CONSCIENTIOUS OBJECTORS

Mr. Chairman and Members of the Committee: We appreciate this opportunity to appear before you today and express our concerns. I am Herman Will, an attorney and long-time national staff person of the United Methodist Church as well as a member of the Consultative Council of the National Interreligious Service Board for Conscientious Objectors. As a conscientious objector under Selective Service assignment I directed a hospital and public health project in Puerto Rico which employed 25 conscientious objectors in alternative service during World War II.

NISBCO is a nonprofit service organization formed in 1940 to respond to the needs of conscientious objectors and all individuals concerned with the rights of conscience. We represent a broad coalition of 50 religious denominations, national religious groups and ethical organizations. A list of the members of the NISBCO Board of Directors is attached to this statement. NISBCO provides information and nondirective counseling services to conscientious objectors already in the military, to those facing induction, registration or recruitment, and to individuals concerned about increasing militarism in our society. We also maintain an active concern with policies and legislation which affect conscientious objectors. Our commitment to conscientious objectors' rights and concerns leads us to respond to significant legislation and regulations and to examine critically the policies and procedures of the Selective Service System.

One area of Selective Service's activities which especially concerns us is the development of an Alternative Service Program for conscientious objectors during a period of inductions. Alternative service is the means by which conscientious objectors to military service fulfill the legal requirement to serve their country. As an organization representing conscientious objectors, NISBCO is committed to ensuring that alternative service is planned and implemented in the manner most consistent with both the beliefs of conscientious objectors and the benefit of society as a whole.

Selective Service is currently developing an Alternative Service Program, and their FY 1983 budget request and FY 1982 supplemental request include funds specifically designated for establishing the Alternative Service Program. The FY 1983 budget requests $248,000 for "contractor support...to prepare the full set of detailed functional requirements and to complete development and testing" of the Alternative Service System, as well as $50,000 "to assist in the continued development and maintenance of the employer network, test procedures and work with the region staff in the training of Reserve Forces officers for mobilization assignments in the Alternative Service Program." In their FY 1982 supplemental budget request Selective Service asks for $122,000 to develop a computerized "Alternative Service Program tracking and management system to facilitate and monitor the placement of conscientious objectors in appropriate civilian work." These funds in the FY 1983 budget and FY 1982 supplemental are an increase over alternative service funding which Selective Service has already been drawing on for several years.

We are requesting that all funds for Alternative Service Program development be deleted from the Selective Service FY 1983 budget and FY 1982 supplemental because the Alternative Service Program which Selective Service proposes to develop with these funds is unacceptable to the religious and conscientious objector community whom the program will involve.

It is our concern that Selective Service is funding and establishing an Alternative Service Program without addressing the sincere objections of those for whom the program is designed. It would be unwise to proceed with the specifics of this program until further dialogue between Selective Service and the religious and conscientious objector community can produce an Alternative Service Program which will be acceptable to all concerned. With these concerns in mind we are requesting that all the money designated for the proposed Alternative Service Program be deleted from the Selective Service budget.

Since its founding NISBCO has coordinated communication between Selective Service and religious bodies on alternative service. We intend to continue in this role with the hope that open-minded dialogue between Selective Service and the community of those concerned with conscientious objectors will result in an Alternative Service Program which allows for the fullest and fairest use of conscientious objectors' training, experience and desire to serve.

NISBCO has followed closely the Alternative Service Program plans which Selective Service has been developing since Fall of 1980. Several major aspects of the Alternative Service Program currently proposed are unacceptable to religious bodies who plan to provide alternative service employment in the event of a draft as they have done in the past. Although on several occasions we have expressed to Selective Service our serious concerns about specific aspects of the plan and the general character of the proposed Alternative Service Program, Selective Service has not modified the plans significantly so as to deal with these concerns.

According to current planning, alternative service placements would be made by Selective Service--together with FEMA, the Department of Labor and other agencies--and would be prioritized in terms of civilian support of military needs. The abilities of individual conscientious objectors and the mobilization jobs needing to be filled would then be matched by a computerized data process. Only after mobilization priority jobs are filled will conscientious objectors be allowed to request approval on an individual basis for a job placement in which they believe they can render significant service. Moreover, in their assigned placement, conscientious objectors would be responsible to the Selective Service Alternative Service Program and supervised by Alternative Service personnel consisting at least initially of military reservists or active duty military, despite provision in the law for "civilian work." Each conscientious objector would also be subject to immediate transfer from one alternative service placement to another at the discretion of the Director.

This concept of alternative service presents two basic problems, the first for the conscientious objector, the second for the religious body that would like to provide alternative service employment.

The first problem is that alternative service based upon priorities growing out of military mobilization provides no guarantee that persons will not be assigned to work that would violate their conscience because of its involvement in a war effort. Alternative service has been established by law for conscientious objectors precisely because they can not in conscience assist a war effort even in a noncombatant capacity.

Conscientious objectors to military service recognize that under the Military Selective Service Act they must perform work "in the national health, safety and interest." To add by regulation the requirement that alternative service placements must meet mobilization priority standards actually contradicts the intent of the law. Under the proposed Alternative Service Program, even though conscientious objectors would not be in uniform, they would be performing essentially noncombatant service under the direction of the military, or related to the military effort.

The second problem is posed for religious bodies who wish to provide alternative service placements for their members who are objectors, and for others as well. Religious voluntary agencies make alternative service programs available primarily for their own members. While they are glad to accept other conscientious objectors, there is little purpose for agencies to provide alternative service employment if that employment cannot be assured for those members of their own religious bodies who are conscientious objectors.

If conscientious objectors have no opportunity to seek alternative service employment until after an unspecified number of priority jobs are filled, they may never be allowed to perform alternative service in a program provided by their own religious body. This would be a serious problem for certain religious communities which seek to maintain close ties with their members in alternative service.

Of further concern is the fact that Selective Service seems intent on certifying alternative service jobs rather than programs. Thus it seems apparent that conscientious objectors will not be able to seek assignment to agency programs of their choice, but will be limited to specific job assignments from Selective Service, either in a priority category or one of a number of other jobs from which they may be permitted to choose.

This placement system for conscientious objectors is a key aspect of the Alternative Service Program to which the groups represented in NISBCO have been objecting since the concept was first introduced. Selective Service first presented current plans for alternative service in a November 1980 draft of the "Alternative Service Concept Paper." This paper was officially published for public comment in the Federal Register in January, 1981.

A great deal of public comment was received on the proposed Alternative Service Concept Paper. The reaction from major religious bodies, individuals and groups representing conscientious objectors' concerns was one of strong opposition to many aspects of the proposal. All of the comments submitted to Selective Service concerning the Alternative Service Concept Paper, as well as all versions of the paper, are included with the appendix to this testimony. NISBCO communicated the general reaction of the conscientious objector community, and our concerns with the proposed alternative service plan, to Selective Service. We specifically objected to the elimination of the opportunity for conscientious objectors to secure their own alternative service work, in accordance with the law's requirements, within a reasonable period of time.

An examination of the public comments on the concept paper reveals many concerned individuals and groups share our belief that the Alternative Service Program Selective Service is developing is unacceptable. Fifty-three of the sixty-two comments received on the concept paper expressed doubt as to the fairness and appropriateness of the plan outlined in the paper. Strong objections were voiced to the fact that under this proposal military reservists would be heavily involved in running alternative service, despite the fact that such service is by law described as civilian work. Specific objection was also registered to the fact that job priorities would be designated by the Federal Emergency Management Agency.

Unfortunately, in alternative service planning Selective Service has not reflected a sensitivity to the concerns expressed by the conscientious objector community. Selective Service summarized and responded to the public comments on the Alternative Service Concept Paper in a document dated June 17, 1981 (see Appendix). A comparison of the actual comments received and Selective Service's summary/response on the comments indicates the agency did not thoroughly or seriously consider the objections of those affected by alternative service in continuing alternative service planning. NISBCO's analysis of the Selective Service summary (in a letter to Dr. Bond dated September 27, 1981--see Appendix) discusses how the agency distorted or failed to respond to objections raised in the comments.

Selective Service's failure to respond to the concerns of the conscientious objector community is reflected even more clearly in the "revised" Alternative Service Concept Paper dated June, 1981. While this paper was supposed to take into account public comments received, the major objections contained in the comments were not reflected by any substantive change in the concept paper.

The most recent description of alternative service planning, the June 1981 concept paper, is almost identical in approach and procedure to the first draft of this paper in November of 1980. Donald Eberly of the Selective Service Alternative Service Department, in a letter to NISBCO dated February 4, 1982, has stressed that the Alternative Service Concept Paper is being used as the basic guide for the Alternative Service Program (see Appendix).

Obviously the Alternative Service Program which Selective Service is now developing does not have the support of the religious and conscientious objector community whom the proposal would affect. If Selective Service establishes this Program according to current plans the Program will be difficult if not impossible to administer. Many religious groups and individuals who are willing to perform alternative service, for reasons of conscience may not be able to cooperate with the plan. The Alternative Service Program is almost certain to generate litigation and conflict which can be avoided if alternative service planning is handled more sensitively and realistically at this point.

Surely it makes more sense for Selective Service to engage in further open dialogue with the parties concerned with alternative service planning in order to develop a workable plan which would meet the needs of all concerned. Conscientious objectors generally are as willing to serve their country as any inducted soldier, but their service is likely to be meaningful and productive only when they believe in the morality and value of the service performed. Many conscientious objectors would not see their service as meaningful or moral if it involved fitting into an assigned position determined by Selective Service to be a war-time priority. Many, in fact, would regard such work as distinctly immoral, and would in conscience feel bound to refuse it.

SUMMARY

An Alternative Service Program which respects the religious freedom of conscientious objectors and allows them to fulfill their legal obligation in an effective, productive manner could be developed. Conscientious objectors should be allowed to find their own alternative service placements, if they so desire, within a reasonable period of time. These placements could be reviewed and approved by Selective Service, or by local boards, as was done successfully in the past. Religious agencies should be able to use their established voluntary service programs as assignments for conscientious objectors, rather than having to submit each individual alternative service placement to Selective Service for approval, though actual placements would be reported to Selective Service.

An Alternative Service Program which allows conscientious objectors the freedom to choose their own service would also be simpler to administer. Alternative service administration could be less centralized and bureaucratic.

We believe it is unwise to fund the computerized Alternative Service Tracking and Management System at this time. There is no immediate need to have an Alternative Service Program established and ready for use. There is no system for inductions, the all volunteer force is meeting or exceeding all manpower needs, and the current administration is opposed to reinstating a draft.

At this point Selective Service without difficulty could implement changes in alternative service planning which would create a fairer and more practical program acceptable to all involved. We believe that the Congress should not provide additional funds for alternative service until a more appropriate and workable Alternative Service Program is formulated by Selective Service. We urge the members of this subcommittee to delete all funds in the Selective Service FY 1983 budget and FY 1982 supplemental request designated for development of the proposed Alternative Service Program.

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There are 39 other denominations and national religious and ethical groups that are members of the National Interreligious Service Board for Conscientious Objectors.

APPENDIX

DRAFT OF ALTERNATIVE SERVICE CONCEPT PAPER

SELECTIVE SERVICE SYSTEM—NOVEMBER 1980

INTRODUCTION

Following a long tradition in U.S. History, the Military Selective Service Act imposes a general citizen obligation for military service. All men, aged 18 to 26, are subject to be called for training and service in the Armed Forces. Within the general citizen obligation, the Act also recognizes that there are individuals whose religious or moral beliefs prohibit them from participating in any type of warfare. Thus, under the Act, Conscientious Objectors are exempted from military service, but must, in lieu of induction, fulfill their citizen obligation by performing "such civilian work contributing to the maintenance of the national health, safety or interest as the Director may deem appropriate". The Director of Selective Service is specifically charged with the responsibility "for the placement of such persons (Conscientious Objectors) in appropriate civilian work". (50 U.S.C. App.§ 456 (j) Supp.)

This paper presents a concept for an Alternative Service Program whereby the Director of Selective Service can insure that Conscientious Objectors will meet their obligation through their placement in jobs contributing to the national health, safety or interest. The concept embraces a confluence of civilian manpower priorities, specific job openings appropriate for alternative service and individual skills in an efficient and systematic way which will treat Conscientious Objectors fairly and with dignity.

PROGRAM STRUCTURE

The Alternative Service Program for Conscientious Objectors would operate under a structure which would provide for the interaction of three primary program components. These are:

1. Priorities

   The Alternative Service Program must identify areas of crucial civilian manpower shortages and set placement priorities.

2. Jobs

   Within the priority areas, the Alternative Service Program must identify specific job openings.

3. People

   The Alternative Service Program must be able to determine the aptitudes and abilities of participating Conscientious Objectors and match them with jobs contributing to the national health, safety or interest.

Priorities

Alternative service would be performed by Conscientious Objectors in lieu of induction into the Armed Forces, therefore, the program would be activated only during a national emergency and mobilization. In such an emergency, it is expected that shortages of civilian manpower would develop as large numbers of young people enter military service, and industrial needs place new stresses on the labor market. These circumstances would create a need for national and regional resource and manpower management. As the agency within the Federal Government designated to serve as the focal point for emergency activities, the Federal Emergency Management Agency (FEMA) has the responsibility for planning resource management and stabilization of the economy in a national emergency.

FEMA's responsibilities relate to Selective Service because Conscientious Objectors placed in work in the national health, safety or interest would constitute a manpower pool which could be used to fill shortages in essential civilian areas. FEMA could identify both public and private manpower shortages and establish priorities for placing workers in those areas. Selective Service would make every attempt to place Conscientious Objectors in accordance with the priorities so long as the jobs were in conformity with the legal requirements for alternative service.

In the manpower areas relevant to an Alternative Service Program, FEMA would obtain data from three sources. First, the Department of Labor would receive reports from such units as the Bureau of Labor Statistics, the U.S. Employment Service and CETA prime sponsors. These reports would be relayed from the Department of Labor to FEMA. Second, agencies such as the Departments of Agriculture, Interior, Housing and Urban Development, Transportation, Health and Human Services, Education and Energy would review reports on manpower needs from their field units and make this information available to FEMA. Third, non-federal associations such as the National Association of Counties, the National League of Cities, the National Governors Association, the American Hospital Association and the National Education Association would survey periodically their constituent members to determine manpower needs.

FEMA would analyze this sometimes redundant data in a way that eliminated duplication, resolved contradictory data inputs and identified geographic and functional areas of greatest need. This process would permit FEMA to advise Selective Service of both national and regional priority manpower needs.

There would also be an important corollary to this process of determining priorities. The public and private agencies involved in analyzing and synthesizing data for FEMA would become aware of their respective manpower shortages. This awareness would presumably lead them to take the initiative in filling manpower shortages. To the extent that their needs could be met by Conscientious Objectors, they would be as eager to enlist them as Selective Service would be to place them. This would facilitate the placement process and permit all agencies concerned to move expeditiously toward the accomplishment of their objectives.

Selective Service National Headquarters would be responsible for overall management and coordination with FEMA and the other agencies. On the regional level, the Selective Service System would review employment priorities as they are channeled down from the national headquarters. An evaluation of job descriptions submitted to the regional offices would be conducted based on the employment priorities. In addition, the Regional Alternative Service office would conduct operational evalutations of the Alternative Service work programs within the region.

As a program designed in part to help alleviate civilian manpower shortages in a national mobilization, it is crucial that the Alternative Service Program be designed to insure a rapid and efficient placement of workers to crucial areas. The Alternative Service Program must be able to stimulate employers to participate. Moreover, the Alternative Service Program must be able to guarantee the timely placement of Conscientious Objectors. For these reasons, it is proposed that the Federal Government fund the alternative service work through a system of stipends or employer tax incentives.

Jobs

The manpower placement priorities determined through the efforts of FEMA, the Selective Service System and the Department of Labor, would be applied to job openings identified as suitable for alternative service placements. The listing of approved job openings would be derived from job openings submitted to the regional offices. Job openings submitted to the regional offices for evaluation would come from several different sources. Liaison activities between the designated local Selective Service System offices and the state and local U.S. Employment Service offices would provide a broad source of job openings. Local Alternative Service office contacts with state and local governments, community health and service organizations would also provide a source of available jobs. Additionally, religious organizations could submit alternative service employment programs for evaluation. Following the evaluation for appropriateness to alternative service, a job description would either be deemed acceptable, and subsequently entered into the data files established for approved job descriptions, or unacceptable, in which case it would be dropped from the process.

Job openings submitted for evaluation by the various sources would be entered into the data banks through terminals located at designated Alternative Service offices. The data system, established to maintain the Alternative Service Program information files, would consist of a data bank at the national level with input coming from and output flowing to the designated area and regional Alternative Service offices. The data system would provide two types of output; output about all Conscientious Objectors who are or were involved in the program and data about the jobs available and unfilled, and those jobs already filled in the program.

The job identification and development function would require assistance from FEMA, Department of Labor and Selective Service System National Headquarters to encourage employers experiencing manpower shortages to submit their job openings. Additionally, the Department of Labor would serve the Alternative Service Program by facilitating a cooperative effort between the Alternative Service area offices and the state and local U.S. Employment Service offices in identifying potential job placements. Personnel from state and local U.S. Employment Service offices assigned to area Alternative Service offices, serving in a liaison capacity, would assist these offices in identifying potential job placements. Arrangements for this assistance would be channeled through the Department of Labor's national office of the U.S. Employment Service.

In order to identify public agencies and private organizations prepared to accept Conscientious Objectors, the Alternative Service Program would undertake a series of discussions with such potential employers in advance of mobilization. These discussions would lead to tentative arrangements that would permit alternative service to meet its responsibilities for the placement of Concientious Objectors.

People

A viable and successful Alternative Service Program must seek to match the skills and abilities of Conscientious Objectors with the priority job openings. Skill and aptitude tests could be administered to incoming Conscientious Objectors. Additionally, Conscientious Objectors could be interviewed by alternative service personnel at the local Selective Service office. Potential job placements would be made from the job bank. Conscientious Objectors could be placed in individual job openings or in approved group work projects.

Unlike virtually all other placement agencies, alternative service would perform no recruitment functions whatsoever. It would not be the function of the Alternative Service Program to find Conscientious Objectors for all the manpower shortages that may exist in an emergency. Rather, it would be the job of the Alternative Service Program to place everyone who was classified as a Conscientious Objector in an alternative service job which contributed to the maintenance of the national health, safety or interest. This calls for a placement process oriented to the Conscientious Objectors rather than to the jobs to be filled.

Alternative service personnel would be responsible for giving to persons entering alternative service (1) information concerning citizenship obligations and alternative service as a concept and (2) information about the Alternative Service Program, including pay, leave duration of service and medical coverage. Depending on the nature of the emergency, it is also possible that alternative service entrants would receive training in areas such as first aid. Although alternative service placements are expected to be quite varied, this common training would equip them, regardless of their alternative service job, to render a much needed humanitarian service in an emergency.

Alternative Service would retain the right to transfer Conscientious Objectors on short notice to meet new emergency manpower shortages. It would, however, seek to maximize the Conscientious Objector's job retention. The job training and day-to-day supervision of Conscientious Objectors in the program would be the responsibility of the employer. Both the employer and the Conscientious Objector would have reporting requirements to Alternative Service and be subject to audits.

In the placement and oversight of alternative service work projects, Alternative Service would seek ways to insure that both the participants and the public were aware that alternative service is a necessary and legitimate fulfillment of the Conscientious Objector's obligation as a citizen. Alternative Service Program representatives would visit work sites to maintain close contact with Conscientious Objectors. Employers and beneficiaries of alternative service work would be encouraged to publicly recognize the contribution of the program.

The proposed function and responsibilities of each agency are summarized in Chart I. It depicts the responsibilities of the national, regional and local branches of Federal agencies, state and local governments and private employers participating in the Alternative Service Program.

ADMINISTRATION

As the Alternative Service Program is a necessary component to Selective Service's mission of providing untrained manpower in a national emergency, Selective Service must retain all administrative and programmatic control over the Alternative Service Program. To promote efficiency and accountability, the structure of the Alternative Service Program would parallel the Selective Service structure as closely as feasible. Like inductees, Conscientious Objectors would be processed completely at the local level by alternative service personnel stationed in designated area offices.

In addition to their job placement function, alternative service personnel would be the primary administrative contact for both participating employers and working Conscientious Objectors within the area of jurisdiction. The alternative service personnel would continue to be the contact points for Conscientious Objectors throughout their service. Alternative service personnel would be responsible for initiating and maintaining the files of Conscientious Objectors involved in the program. They would handle travel arrangements and payments to Conscientious Objectors. Additionally, alternative service personnel would be responsible for receiving reports from and auditing participating employers. Selective Service regional offices would provide administrative and logistical support to alternative service personnel. Operational evaluation of the Alternative Service Program placements within the regions would be conducted by alternative service officials.

At the national level, the Selective Service System would initiate all administrative policy and establish the necessary guidelines to enable individual employers to supervise the Conscientious Objectors under their authority. The Alternative Service Program National Headquarters would provide overall management and monitoring of the program.

ADVISORY AND COORDINATING COMMITTEE

The participation of a number of federal agencies on a standing coordinating committee is a viable means of providing the coordination and input needed in implementing the Alternative Service Program. Policy and guidance established by the Selective Service System would be presented to the committee agencies for dissemination. The committee would also provide the agencies with a contact point for expressing both manpower needs and input for priority determinations in meeting those needs. The agencies involved would include, but not be limited to, Selective Service System, FEMA, Department of Labor, Department of Agriculture, Department of the Interior and ACTION. The Selective Service System would form and chair the coordinating committee.

In addition to a federal coordinating committee, it would be advantageous to have an advisory committee on alternative service. Organizations or individuals interested in Conscientious Objectors and alternative service and employers participating in the program could be represented on the committee. If the plan for a broader Selective Service Advisory Committee is carried out, a panel of that committee could be devoted to alternative service.

SUMMARY

The Director of Selective Service is required by law to place Conscientious Objectors in appropriate civilian work. This paper sets forth a conceptual framework within which Conscientious Objectors can meet their alternative service obligation with fairness and dignity.

The framework is constructed from a tripod consisting of priorities, jobs and people. Conscientious Objectors would make a civilian contribution by working in areas of national priority. The Federal Emergency Mangement Agency (FEMA) would take the lead in setting these priorities. Most of the actual jobs in alternative service would be generated locally as a result of extensive contacts between area alternative service officers and a host of private, public service organizations, such as hospitals, and public agencies, such as the U.S. Employment Service.

Finally, Conscientious Objectors would be placed in priority jobs appropriate to their abilities. The placement process would be assisted by a job data bank which would also maintain a continuing profile of alternative service jobs and people.

Such an Alternative Service Program would fulfill the Selective Service Director's responsibility under the law, would contribute to the nation's health, safety and interest in a critical time, would render humanitarian assistance that would otherwise be neglected; and would sustain the faith of those who defend the nation.

CHART I

FUNCTIONS OF COOPERATING AGENCIES

IN ALTERNATIVE SERVICE

	SELECTIVE SERVICE SYSTEM	FEDERAL EMERGENCY MANAGEMENT AGENCY	DEPARTMENT OF LABOR	FEDERAL AGENCIES STATE AND LOCAL GOVERNMENTS	NON-GOVERNMENTAL EMPLOYERS
NATIONAL	•Policy Development •Program Guidance •Maintains Job Bank •National Job Development •Administration •Coordination with Other Federal Agencies •Chairs Alternative Service Interagency Committee	•Reviews Data on Civilian Manpower Shortages •Sets Priorities for Filling Shortages •Member of Alternative Service Interagency Committee	•Supplies Manpower Data to FEMA and SSS •Participates in Priority Setting •Directs USES in SSS/USES Coordination •Member of Alternative Service Interagency Committee	•Develop and Submit Manpower Shortages to FEMA •Organize Existing Programs for Possible Employment of CO's •Member of ASP Committee	•Participation on Alternative Service Advisory Committee
REGIONAL	•Administrative Support for Local Offices •Determines Acceptability of Job Openings for ASP •Review and Interpret Employment Priorities •Operational Evaluating of ASP Work Program in Region •Receives Job Listings	•Receives Data on Manpower Shortages in Region •Interprets Priorities According to Specific Regional Needs •Coordinates with SSS Regions	•Supplies Manpower Data	•Submit Manpower Needs to Agency's National Headquarters	
LOCAL	•Administrative Responsibility for CO's •Interviews and Places CO's •Oversight of Local ASP Work Projects •Review Job Listings •Coordinate with USES Office •Local Job Development		•USES Offices Establish Liaison with Alternative Service Local Office •Submits Job Listings to Alternative Service •Assists in Local Job Development	•Submit Specific Job Openings •Day-to-Day Job Supervision of CO's •Training of CO's •Reporting to Local ASP offices	•Submit Specific Job Openings •Day-to-Day Job Supervision of CO's •Training of CO's •Reporting to Local ASP Offices

ALTERNATIVE SERVICE CONCEPT PAPER

SELECTIVE SERVICE SYSTEM—JANUARY 1981

INTRODUCTION

Following a long tradition in U.S. History, the Military Selective Service Act imposes a general citizen obligation for military service. All men, aged 18 to 26, are subject to be called for training and service in the Armed Forces. Within the general citizen obligation, the Act recognizes that there are individuals whose religious or moral beliefs prohibit them from participating in any type of warfare. Thus, under the Act, Conscientious Objectors are exempted from military service, but must, in lieu of induction, fulfill their citizen obligation by performing "such civilian work contributing to the maintenance of the national health, safety or interest as the Director may deem appropriate". The Director of Selective Service is specifically charged with the responsibility "for the placement of such persons (Conscientious Objectors) in appropriate civilian work". (50 U.S.C. App.§ 456 (j) Supp.)

This paper presents a concept for an Alternative Service Program whereby the Director of Selective Service can insure that Conscientious Objectors will meet their obligation through their placement in jobs contributing to the national health, safety or interest. The concept embraces a confluence of civilian manpower priorities, specific job openings appropriate for alternative service and individual skills in an efficient and systematic way which will treat Conscientious Objectors fairly and with dignity.

PROGRAM STRUCTURE

The Alternative Service Program for Conscientious Objectors would operate under a structure which would provide for the interaction of three primary program components. These are:

1. Priorities

   The Alternative Service Program must identify areas of crucial civilian manpower shortages and set placement priorities.

2. Jobs

   Within the priority areas, the Alternative Service Program must identify specific job openings.

3. People

   The Alternative Service Program must be able to determine the aptitudes and abilities of participating Conscientious Objectors and match them with jobs contributing to the national health, safety or interest.

Priorities

Alternative service would be performed by Conscientious Objectors in lieu of induction into the Armed Forces, therefore, the program would be activated only during a national emergency and mobilization. In such an emergency, it is expected that shortages of civilian manpower would develop as large numbers of young people enter military service, and industrial needs place new stresses on the labor market. These circumstances would create a need for national and regional resource and manpower management. As the agency within the Federal Government designated to serve as the focal point for emergency activities, the Federal Emergency Management Agency (FEMA) has the responsibility for planning resource management and stabilization of the economy in a national emergency.

FEMA's responsibilities relate to Selective Service because Conscientious Objectors placed in work in the national health, safety or interest would constitute a manpower pool which could be used to fill shortages in essential civilian areas. FEMA could identify both public and private manpower shortages and establish priorities for placing workers in those areas. Selective Service would make every attempt to place Conscientious Objectors in accordance with the priorities so long as the jobs were in conformity with the legal requirements for alternative service.

In the manpower areas relevant to an Alternative Service Program, FEMA would obtain data from three sources. First, the Department of Labor would receive reports from such units as the Bureau of Labor Statistics, the U.S. Employment Service and CETA prime sponsors. These reports would be relayed from the Department of Labor to FEMA. Second, agencies such as the Departments of Agriculture, Interior, Housing and Urban Development, Transportation, Health and Human Services, Education and Energy would review reports on manpower needs from their field units and make this information available to the Office of Personnel Management and FEMA. Third, non-federal associations such as the National Association of Counties, the National League of Cities, the National Governors Association, the American Hospital Association and the National Education Association would survey periodically their constituent members to determine manpower needs.

FEMA would analyze this sometimes redundant data in a way that eliminated duplication, resolved contradictory data inputs and identified geographic and functional areas of greatest need. This process would permit FEMA to advise Selective Service of both national and regional priority manpower needs.

There would also be an important corollary to this process of determining priorities. The public and private agencies involved in analyzing and synthesizing data for FEMA would become aware of their respective manpower shortages. This awareness would presumably lead them to take the initiative in filling manpower shortages. To the extent that their needs could be met by Conscientious Objectors, they would be as eager to enlist them as Selective Service would be to place them. This would facilitate the placement process and permit all agencies concerned to move expeditiously toward the accomplishment of their objectives.

Selective Service National Headquarters would be responsible for overall management and coordination with FEMA and the other agencies.

On the regional level, the Selective Service System would review employment priorities as they are channeled down from the national headquarters. An evaluation of job descriptions submitted to the regional offices would be conducted based on the employment priorities. In addition, the Regional Alternative Service office would conduct operational evalutations of the Alternative Service work programs within the region.

As a program designed in part to help alleviate civilian manpower shortages in a national mobilization, it is crucial that the Alternative Service Program be designed to insure a rapid and efficient placement of workers to priority areas. The Alternative Service Program must be able to stimulate employers to participate. Moreover, the Alternative Service Program must be able to guarantee the timely placement of Conscientious Objectors. For these reasons, it is proposed that the Federal Government fund alternative service work through a system of stipends or employer tax incentives.

Jobs

The manpower placement priorities determined through the efforts of FEMA, the Selective Service System and the Department of Labor, would be applied to job openings identified as suitable for alternative service placements. The listing of approved job openings would be derived from job openings submitted to the regional offices. Job openings submitted to the regional offices for evaluation would come from several different sources. Liaison activities between the designated local Selective Service System offices and the state and local U.S. Employment Service offices would provide a broad source of job openings. Local Alternative Service office contacts with state and local governments, community health and service organizations would also provide a source of available jobs. Additionally, job openings in Federal agencies could be identified through the Office of Personnel Management. Following the evaluation for appropriateness to alternative service, a job description would either be deemed acceptable, and subsequently entered into the data files established for approved job descriptions, or unacceptable, in which case it would be dropped from the program.

Job openings submitted for evaluation by the various sources would be entered into the data banks through terminals located at designated Alternative Service offices. The data system, established to maintain the Alternative Service Program information files, would consist of a data bank at the national level with input coming from and output flowing to the designated area and regional Alternative Service offices. The data system would provide two types of output; output about all Conscientious Objectors who are or were involved in the program and data about the jobs available and unfilled, and those jobs already filled in the program.

The job identification and development function would require assistance from FEMA, the Office of Personnel Management, Department of Labor and Selective Service System National Headquarters to encourage employers experiencing manpower shortages to submit their job openings. Additionally, the Department of Labor would serve the Alternative Service Program by facilitating a cooperative effort between the Alternative Service area offices and the state and local U.S. Employment Service offices in identifying potential job placements. Personnel from state and local U.S. Employment Service offices assigned to area Alternative Service offices, serving in a liaison capacity, would assist these offices in identifying potential job placements. Arrangements for this assistance would be channeled through the Department of Labor's national office of the U.S. Employment Service.

In order to identify public agencies, private organizations and religious organizations which would be prepared to employ Conscientious Objectors, the Alternative Service Program staff will undertake a series of discussions with such potential employers in advance of mobilization. These organizations would be encouraged to develop employment programs for Conscientious Objectors. The programs would have to meet guidelines established by Selective Service to insure that they would contribute to the national health, safety or interest and be appropriate for alternative service. Selective Service would develop agreements, which would include provisions for compensation, placement, and monitoring with the sponsoring organizations, so that the employment programs would be ready to operate and accept Conscientious Objectors shortly after a mobilization.

People

A viable and successful Alternative Service Program must seek to match the skills and abilities of Conscientious Objectors with the priority job openings. Skill and aptitude tests could be administered to incoming Conscientious Objectors. Additionally, Conscientious Objectors could be interviewed by alternative service personnel at the local Selective Service office. Potential job placements would be made from the job bank. Conscientious Objectors could be placed in individual job openings or in approved group work projects.

Unlike virtually all other placement agencies, alternative service would perform no recruitment functions whatsoever. It would not be the function of the Alternative Service Program to find Conscientious Objectors for all the manpower shortages that may exist in an emergency. Rather, it would be the job of the Alternative Service Program to place everyone who was classified as a Conscientious Objector in an alternative service job which contributed to the maintenance of the national health, safety or interest. This calls for a placement process oriented to the Conscientious Objectors rather than to the jobs to be filled.

Alternative service personnel would be responsible for giving to persons entering alternative service (1) information concerning citizenship obligations and alternative service as a concept and (2) information about the Alternative Service Program, including pay, leave, duration of service and medical coverage. Depending on the nature of the emergency, it is also possible that alternative service entrants would receive training in areas such as first aid. Although alternative service placements are expected to be quite varied, this common training would equip them, regardless of their alternative service job, to render a much needed humanitarian service in an emergency.

Alternative Service would retain the right to transfer Conscientious Objectors on short notice to meet new emergency manpower shortages. It would, however, seek to maximize the Conscientious Objector's job retention. The job training and day-to-day supervision of Conscientious Objectors in the program would be the responsibility of the employer. Both the employer and the Conscientious Objector would have reporting requirements to Alternative Service and be subject to audits.

In the placement and oversight of alternative service work projects, Alternative Service would seek ways to insure that both the participants and the public were aware that alternative service is a necessary and legitimate fulfillment of the Conscientious Objector's obligation as a citizen. Alternative Service Program representatives would visit work sites to maintain close contact with Conscientious Objectors. Employers and beneficiaries of alternative service work would be encouraged to publicly recognize the contribution of the program.

The proposed function and responsibilities of each agency are summarized in Chart I. It depicts the responsibilities of the national, regional and local branches of Federal agencies, state and local governments and private employers participating in the Alternative Service Program.

ADMINISTRATION

As the Alternative Service Program is a necessary component to Selective Service's mission of providing untrained manpower in a national emergency, Selective Service must retain all administrative and programmatic control over the Alternative Service Program. To promote efficiency and accountability, the structure of the Alternative Service Program would parallel the Selective Service structure as closely as feasible. Like inductees, Conscientious Objectors would be processed completely at the local level by alternative service personnel stationed in designated area offices.

In order to meet its responsibility in a timely fashion, Selective Service will explore possibilities for the rapid processing and placement of a large number of Conscientious Objectors. Discussions will be held with educational institutions and other organizations that may be interested in hosting a number of Conscientious Objectors. It is anticipated that a number of provisional agreements will be made between Selective Service and sponsoring organizations.

In addition to their job placement function, alternative service personnel would be the primary administrative contact for both participating employers and working Conscientious Objectors within the area of jurisdiction. The alternative service personnel would continue to be the contact points for Conscientious Objectors throughout their service. Alternative service personnel would be responsible for initiating and maintaining the files of Conscientious Objectors involved in the program. They would handle travel arrangements and payments to Conscientious Objectors. Additionally, alternative service personnel would be responsible for receiving reports from and auditing participating employers. Selective Service regional offices would provide administrative and logistical support to alternative service personnel. Operational evaluation of the Alternative Service Program placements within the regions would be conducted by alternative service officials.

CHART I

FUNCTIONS OF COOPERATING AGENCIES

IN ALTERNATIVE SERVICE

	SELECTIVE SERVICE SYSTEM	FEDERAL EMERGENCY MANAGEMENT AGENCY	DEPARTMENT OF LABOR	FEDERAL AGENCIES STATE AND LOCAL GOVERNMENTS	NON-GOVERNMENTAL EMPLOYERS
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REGIONAL	•Administrative Support for Local Offices •Determines Acceptability of Job Openings for ASP •Review and Interpret Employment Priorities •Operational Evaluating of ASP Work Program in Region •Receives Job Listings	•Receives Data on Manpower Shortages in Region •Interprets Priorities According to Specific Regional Needs •Coordinates with SSS Regions	•Supplies Manpower Data	•Submit Manpower Needs to Agency's National Headquarters	
LOCAL	•Administrative Responsibility for CO's •Interviews and Places CO's •Oversight of Local ASP Work Projects •Review Job Listings •Coordinate with USES Office •Local Job Development		•USES Offices Establish Liaison with Alternative Service Local Office •Submits Job Listings to Alternative Service •Assists in Local Job Development	•Submit Specific Job Openings •Day-to-Day Job Supervision of CO's •Training of CO's •Reporting to Local ASP offices	•Submit Specific Job Openings •Day-to-Day Job Supervision of CO's •Training of CO's •Reporting to Local ASP Offices

At the national level, the Selective Service System would initiate all administrative policy and establish the necessary guidelines to enable individual employers to supervise the Conscientious Objectors under their authority. The Alternative Service Program National Headquarters would provide overall management and monitoring of the program.

ADVISORY AND COORDINATING COMMITTEE

The participation of a number of federal agencies on a standing coordinating committee is a viable means of providing the coordination and input needed in implementing the Alternative Service Program.

Policy and guidance established by the Selective Service System would be presented to the committee agencies for dissemination. The committee would also provide the agencies with a contact point for expressing both manpower needs and input for priority determinations in meeting those needs. The agencies involved would include, but not be limited to, Selective Service System, FEMA, Department of Labor, Department of Agriculture, Department of the Interior and ACTION. The Selective Service System would form and chair the coordinating committee.

In addition to a federal coordinating committee, it would be advantageous to have an advisory committee on alternative service. Organizations or individuals interested in Conscientious Objectors and alternative service and employers participating in the program could be represented on the committee. If the plan for a broader Selective Service Advisory Committee is carried out, a panel of that committee could be devoted to alternative service.

SUMMARY

The Director of Selective Service is required by law to place Conscientious Objectors in appropriate civilian work. This paper sets forth a conceptual framework within which Conscientious Objectors can meet their alternative service obligation with fairness and dignity.

The framework is constructed from a tripod consisting of priorities, jobs and people. Conscientious Objectors would make a civilian contribution by working in areas of national priority. The Federal Emergency Mangement Agency (FEMA) would take the lead in setting these priorities. Most of the actual jobs in alternative service would be generated locally as a result of extensive contacts between area alternative service officers and a host of private, public service organizations, such as hospitals, and public agencies, such as the U.S. Employment Service.

Finally, Conscientious Objectors would be placed in priority jobs appropriate to their abilities. The placement process would be assisted by a job data bank which would also maintain a continuing profile of alternative service jobs and people.

Such an Alternative Service Program would fulfill the Selective Service Director's responsibility under the law, would contribute to the nation's health, safety and interest in a critical time, would render humanitarian assistance that would otherwise be neglected; and would sustain the faith of those who defend the nation.

LETTER FROM LAWRENCE W. ROFFEE, JR., ALTERNATIVE SERVICE, SELECTIVE SERVICE SYSTEM

July 15, 1981

Mr. Edgar Metzler
Associate Secretary
Mennonite Board of Congregational
Ministries
Box 1245
Elkhart, Indiana 46515

Dear Ed:

Enclosed you will find a copy of the summary of the comments received on the concept paper and a copy of the revised concept paper.

We are still waiting for a decision on whether to republish the revised concept paper in the Federal Register. If you have any comments on the revised paper we certainly would like to have them.

When you are in Washington again, please stop by.

Sincerely,

Larry

Lawrence W. Roffee, Jr.
Alternative Service

ALTERNATIVE SERVICE CONCEPT PAPER

The Alternative Service Concept Paper was published in the Federal Register on January 22, 1981, and persons and organizations were invited to comment. By the end of the comment period on March 31, 1981, a total of 64 letters and statements had been received from 57 different organizations and individuals. They may be classified as follows:

Individuals	30
Religious groups	19
Educational groups	2
Military groups	2
Veterans group	1
Other groups	3
	57

All comments have been categorized and analyzed, and a draft response to clusters of all the comments is given in this paper. The organization of this report closely parallels that of the concept paper.This report forms the basis for revising the concept paper which, in turn, will become the foundation for a new set of Alternative Service regulations.

TOPIC: BASIC CONCEPT FOR ALTERNATIVE SERVICE

Concept Paper: Notes the legal obligation of Conscientious Objectors to perform civilian work contributing to the national health, safety or interest; and outlines a program which combines priorities, jobs and people, and which treats Conscientious Objectors fairly and with dignity.

Comments

Several commenters said that Selective Service is to be complimented on producing a paper that is a clear statement of a reasonable policy. "Thanks to you and your colleagues for being concerned with the inconsistencies and misconceptions of alternate service during the 1960's and for working to solve some of the problems.The concept paper leaves the impression that the Conscientious Objector is an individual concerned with the welfare of society and not a 'slacker'."

Reply

By planning in advance for an Alternative Service Program, problems can be anticipated and dealt with before such a program is put into effect.

Comment

One commenter said that most people can understand "health" and "safety", but "national interest" is ambiguous and needs to be tightly defined.

Reply

"National interest" comes directly from the legislation mandating the Selective Service System to find and place Conscientious Objectors in Alternative Service positions. It cannot be tightly defined since the national interest varies from time to time. However, a number of examples come readily to mind. These include food production, conservation, caring for the very old and the very young, educational projects, and hospital work.

Comment

A commenter said that the paper should set forth policies on salaries, training, and benefits for Conscientious Objectors.

Reply

Major issues, such as salaries and educational benefits, would have to be decided upon by the Congress. More detailed policies on the conditions of service for Conscientious Objectors will follow in the regulations and subsequent documents published by Selective Service.

Comment

It was suggested by a few commenters that Conscientious Objectors should be accorded the status and rights equivalent to those enjoyed by men and women inducted into the Armed Services.

Reply

Selective Service is of the view that status is something deriving from the public image and cannot be established by government fiat. To give Conscientious Objectors the rights equivalent to those enjoyed by persons in the Armed Forces would be to require Selective Service to establish an enormous administrative superstructure. For example, there would have to be a system of justice for Conscientious Objectors corresponding to that in the Armed Forces. Actually, the rights of persons in Alternative Service correspond more closely to those of civilians than those in the military.

Comment

One commenter suggested that there should be "a complete rewrite of both the regulations and the concept paper, embodying constitutional guarantees, proper historical perspective on the development of Alternative Service, and a philosophical undergirding consistent with our best American traditions."

Reply

The Selective Service position is that Constitutional guarantees exist, whether or not they are stated in a document, and that there is no need to review them in every Government publication. Selective Service did present, very briefly, the legal and philosophical undergirding for Alternative Service, and would expect to do this more extensively in its orientation programs for Alternative Service employees, for Conscientious Objectors, and for those who are the sponsors or the employers of Conscientious Objectors.

Comment

Several commenters suggested that the basic Alternative Service concept should be changed. Some say it should be harsher, with Conscientious Objectors being forced to live more like persons in the Armed Forces, and others say that it should be made softer with Conscientious Objectors able to more or less do their own thing. One person suggested that all Conscientious Objectors be required to serve at some distance from home, another that all Conscientious Objectors be permitted to discharge their obligation in their own way.

Reply

The basis for the Alternative Service Concept Paper is the Military Selective Service Act of 1948 as amended. That Act requires the Director of Selective Service to find and to place Conscientious Objectors in Alternative Service assignments which have two basic characteristics: first, that they be civilian activities, and second, that they be activities which contribute to the maintenance of the national health, safety or interest. Because these are legal requirements for Alternative Service, Selective Service gives priority to these two stipulations. The requirement to relocate Conscientious Objectors some distance from home had been previously in effect in earlier Alternate Service programs. However, the Selective Service believes that the forced relocation of

Conscientious Objectors could very well mean that some Conscientious Objectors' contribution to the national health, safety or interest would be greatly diminished. If a Conscientious Objector can make his greatest contribution to the national health, safety or interest while serving near his home, he should be permitted to do that; and if all Conscientious Objectors were to decide for themselves how to perform Alternative Service, it is clear from previous experience that the Director would not be able to meet his responsibility under the law to place Conscientious Objectors in positions contributing to the maintenance of the national health, safety or interest.

Comment

One commenter asserted that the Alternative Service Program, during World War II, was "a pseudo-democratic experiment in the suppression of a dissident minority in wartime. My reading of the concept paper leads me to believe that the proposed Alternative Service Program incorporates and even extends those features of civilian public service which lead me to that admittedly harsh judgment."

Reply

Selective Service takes strong exception to this assertion. The Selective Service position is that everyone who enters Alternative Service has not done anything illegal, and that the program is to be conducted in a way that treats Conscientious Objectors fairly and with dignity. Two quotations from the concept paper underscore Selective Service's opposition to suppression: "in the placement and oversight of Alternative Service work projects, Alternative Service would seek ways to insure that both the participants and the public were aware that Alternative Service is a necessary and legitimate fulfillment of the Conscientious Objector's obligation as a citizen....Employers and beneficiaries of Alternative Service work would be encouraged to publicly recognize the contribution of the program."

Comment

A few comments suggest that the advance planning for an Alternative Service System is a part of the United States preparations for war, and as such should not be cooperated with in any way.

Reply

Selective Service is required to be prepared for the rapid introduction of conscription, should that be established by law. A standby Alternative Service Program is a necessary part of that preparation.

Comment

Several comments have been received regarding the concluding phrase of the concept paper: "Such an Alternative Service Program would fulfill the Selective Service Director's responsibility under the law; would contribute to the nation's health, safety and interest in a critical time; would render humanitarian assistance that would otherwise be neglected; and would sustain the faith of those who defend the nation." Several commenters said that the last phrase was unclear and asked for a clarification of the statement.

Reply

It is the view of Selective Service that defending the nation is a responsibility not limited to those in the Armed Forces. In fact, the Supreme Court handed down a decision in World War II concerning the status of a Conscientious Objector who had immigrated to the United States, and who had taken an oath to defend the nation when he became a citizen. The contention was made that this person should not qualify as a Conscientious Objector because of the oath he had taken to defend the nation. The Supreme Court found that there were other ways to defend the nation besides going into the military service, and permitted him to enter Alternative Service as a Conscientious Objector. The phrase also refers to the founding principles of this country, particularly those of freedom of religion and freedom of conscience. It is these intangibles to which the clause "sustain the faith" refers. Selective Service believes that having an Alternative Service Program in effect during a time of national emergency will serve as a reminder to all citizens, whether civilian or military, that the high ideals of the American Republic are being sustained.

TOPIC: DETERMINATION OF PRIORITIES FOR ALTERNATIVE SERVICE

Concept Paper: States that Selective Service would make every attempt to place Conscientious Objectors in accordance with priorities given by FEMA, DOL and other Federal agencies, so long as the jobs were in conformity with the legal requirements for Alternative Service.

Comment

Several commenters recommended that Conscientious Objectors should be able to choose their own priorities based upon their respective consciences.

Reply

The legislation establishing Alternative Service clearly makes conscience the determining factor in a person's becoming a Conscientious Objector, but it does not go so far as to permit the same conscience to determine what a Conscientious Objector does in Alternative Service.

Comment

A commenter suggested that the provision which describes placing Conscientious Objectors to fill shortages in essential civilian areas should be dropped, because it is not in the Military Selective Service Act.

Reply

Selective Service anticipates that in a national emergency, there would be shortages in a great many different civilian areas. Selective Service views this statement as little more than a restatement of the legislative requirement to assign Conscientious Objectors to work in positions contributing to the maintenance of the national health, safety or interest.

Comment

One commenter asked if it was necessary for church groups, and others particularly interested in Alternative Service, to establish relationships with the Federal Emergency Management Agency (FEMA). Another agreed that FEMA should set priorities for the Alternative Service Program. Others questioned the role of FEMA, describing it as a quasi-military organization which should not dictate assignments for persons in Alternative Service.

Reply

The Selective Service decision to look to FEMA for advice on priority manpower needs is a discretionary one — it is not required by law. It should also be noted that FEMA would not relate directly to any of the Conscientious Objectors, or even to the sponsors or employers. In every case, the Selective Service System would make the final decision as to the priority for Alternative Service jobs.

However, FEMA does have a legal responsibility to give direction to national employment priorities during a time of national emergency. Since that is the only circumstance under which Alternative Service would exist, it is appropriate that Selective Service look to FEMA for advice on workforce priorities.

TOPIC: ALTERNATIVE SERVICE SPONSORS

Concept Paper: States that Selective Service will encourage public agencies, private and religious organizations, to develop employment programs for Conscientious Objectors in advance of mobilization.

Comment

One commenter said, "Thinking of the numbers who will be seeking the I-O classification, and the promptness with which they must be processed, I was especially pleased to read where you plan to make tentative arrangements with prospective employers before mobilization."

Reply

The existence of such arrangements would facilitate the transition from zero activity to an operating program.

Comment

Several commenters suggested that Selective Service should certify for Alternative Service overall programs of the respective sponsors. It should not be necessary to examine and certify each separate job or project.

Reply

Selective Service encourages potential sponsors to develop programs which could be given such overall approval. It will be necessary that all positions in such a program meet the requirements for Alternative Service positions. Selective Service is aware that a number of potential sponsors have programs for volunteers and others which include some jobs that are strictly service and others which include religious proselytizing. Selective Service could not award blanket coverage to the latter programs.

Comment

One commenter asked, "Would all of our church-sponsored projects be equally available to all Conscientious Objectors, and could we stipulate that all Conscientious Objectors assigned to us had to conform to the same standards of morality and behavior that are customary among members of our church?"

Reply

The answer to both questions is affirmative. Selective Service plans to put all approved programs and projects and jobs into the data bank to be equally available to all Conscientious Objectors. Also, Selective Service recognizes that no sponsors or employers anywhere in the country are under any obligation whatsoever to accept any Conscientious Objector that Selective Service might want to assign to such organizations. Thus, an organization would be entitled to exercise its normal admission standards for working with or participating in that organization. However, to be acceptable to Selective Service, organizations could not discriminate on the basis of race, religion, sex, or national origin.

Comment

One commenter pointed out that a clearer distinction needs to be made between private employers and all others since it is possible that private employers might exploit the Conscientious Objectors.

Reply

Eligibility for becoming an Alternative Service employer would be limited to those performing a public service, such as hospitals and nursing homes. Exploitation will be prevented by careful monitoring and decision-making.

Comment

It was suggested by a commenter that religious groups should not be permitted to submit Alternative Service Programs, since to do so would violate the principle of church/state separation.

Reply

Selective Service has no problem with the sponsorship of Alternative Service programs by religious groups. For many years now, religious organizations have sponsored Federal programs of one sort or another. It is the responsibility of Selective Service, or any other Federal agency, to operate and to monitor the program in a way that its requirements and its standards are properly adhered to.

TOPIC: ALTERNATIVE SERVICE JOBS

Concept Paper: States that Alternative Service would be limited to civilian jobs which contribute to the maintenance of the national health, safety or interest and anticipates that most Conscientious Objectors would remain with their employers throughout their service, but Conscientious Objectors could be transferred to meet emergencies.

Comment

A few commenters said that Alternative Service jobs should be approved which contribute to the improvement of the environment and human welfare, and not simply be those jobs which have to be done because those persons in them have all gone to the battlefield or the defense factory.

Reply

Selective Service agrees with the thrust of this viewpoint but not with all of its implications. For example, if Selective Service were to prohibit the employment of Conscientious Objectors in positions where the previous occupant had gone to the battlefield or the defense factory, it might very well lead —in fact, it would almost certainly lead--to the disapproval of some jobs that would contribute very much to the improvement of the environment and human welfare. Selective Service intends to run the Alternative Service Program, if that ever comes about, in such a way that the improvement of the environment and human welfare is a much more important consideration than the filling of positions left vacant by persons going to the battlefield or the defense factory.

Comment

Several commenters disapproved of Selective Service suggesting that it could arbitrarily transfer Conscientious Objectors to new job placements and questioned whether any conscientious person would want to be part of a system where he could be shifted at the will of Selective Service.

Reply

Selective Service has no plans to make frivolous transfers of Conscientious Objectors from one project to another; in fact, Selective Service would attempt to maximize job retention. Selective Service anticipates that by far the greatest usage of the transfer provision would be to enable persons in permanent Alternative Service assignments to move temporarily to meet emergency needs — whether caused by natural disasters or acts of man. Since the Conscientious Objector performing Alternative Service is at all times under order from the Selective Service System to a particular sponsor or employer, it is necessary to amend that order and to transfer the Conscientious Objector to another sponsor or employer if such an emergency arises.

Comment

Several commenters asked whether Alternative Service workers might be assigned outside of the United States.

Reply

Selective Service is planning for the draft and Alternative Service in the event of a full-scale mobilization, and under such circumstances, Selective Service believes there are two factors which would mitigate against overseas jobs. First of all, it is probable that the national health, safety or interest would require that persons in Alternative Service stay within the United States to perform their service. Secondly, it is quite possible that the lack of transportation arrangements would prevent persons going on overseas assignments.

Comment

One commenter said that Conscientious Objectors should be prohibited from converting their Alternative Service employment into permanent employment.

Reply

Selective Service holds the view that this would be a punitive requirement. While Selective Service does not plan to make Alternative Service a training ground for future employment, neither does it intend to take any steps that would deny any form of employment to Conscientious Objectors upon completion of service.

Comment

It was asked how a basically unskilled Conscientious Objector workforce pool would be placed in useful, nondegrading and nonpunitive jobs if the anticipated workforce shortage does not occur, or if the need arises in skilled, perhaps technical, areas?

Reply

This comment underscores the distinction between priority jobs and eligible jobs in the area of Alternative Service. Given the broad legislative mandate to place persons in civilian work in the national health, safety or interest, it is clear that the number of eligible positions is very large. If it should happen that most persons in Alternative Service were simply not qualified for the priority positions, there would still be a large number of eligible, but perhaps low priority positions where Conscientious Objectors could serve. Such positions need be neither degrading nor punitive. It would be a matter of matching the skills, talents, interests, and preferences of the persons entering Alternative Service with eligible positions.

TOPIC: ALTERNATIVE SERVICE PLACEMENTS

Concept Paper: Suggests a placement process oriented to the need to place all Conscientious Objectors rather than to fill all the jobs available, accompanied by an attempt to match the skills and abilities of the Conscientious Objectors with the priority job openings.

Comments

A few commenters commended the attitude of Selective Service and said it is demeaning for Conscientious Objectors to feel they are simply doing make-work time. "Your placement approach seems to insure that the abilities, needs and convictions of individual Conscientious Objectors would be taken into account."

Reply

The Conscientious Objectors, the prospective employers, and the country would be well-served if the Conscientious Objectors worked on projects which utilized their talents and interests.

Comment

Many commenters said that Conscientious Objectors should be permitted to select their own assignment rather than being assigned to it by Selective Service.

Reply

It is essential to abide by the Military Selective Service Act which requires the Director of Selective Service to place Conscientious Objectors in civilian positions which are in the national health, safety or interest. Accordingly, Selective Service cannot delegate to another party, including the Conscientious Objector, the responsibility for this placement. The placement must be made in a manner accountable to the Director of Selective Service.

Selective Service recognizes the value of a Conscientious Objector choosing his own Alternative Service assignment. We would expect that those Conscientious Objectors who make their own choice, would be happier in it and make fewer requests to move about to other jobs, or otherwise to create a lot of paperwork for the system.

Accordingly, we are planning a placement process in which the Conscientious Objector plays a part in matching his talents and interests with the needs of the sponsor or employer.

Comment

The comment regarding the recruitment of Conscientious Objectors has taken two forms. First, a commenter from one of the historic peace churches has said that his church would likely seek to utilize Conscientious Objectors in church-related programs, so long as it could be ascertained that the persons to be placed there share the religious and service motivations of the church. The commenter would like to have the right to recruit and select applicants for Alternative Service. The second suggestion is that Alternative Service should be parallel to the Armed Forces. So long as the Armed Forces can recruit personnel, Alternative Service sponsors should be able to recruit Conscientious Objectors.

Reply

Selective Service does not view Alternative Service as the kind of program for which anybody is recruited. Rather, persons enter Alternative Service once they have established themselves as Conscientious Objectors. The conditions of service in Alternative Service should simply not be a consideration in the decision of a young man to apply for Conscientious Objector status, nor should persons or institutions interested in conscientious objection, seek to describe Alternative Service as a better option than the military option. The mandatory assignment of persons in Alternative Service derives directly from that person's deeply held beliefs concerning the non-participation in war. In order for an historic peace church, or any other potential sponsor of Alternative Service to qualify for Conscientious Objectors, they would have to meet the eligibility criteria for Alternative Service sponsors. All persons entering Alternative Service would be able to express, both in writing and in person, their skills, aptitudes, interests and preferences for Alternative Service assignments. While Selective Service maintains final responsibility for the placement of all Conscientious Objectors, a careful and personalized consideration would be given to these individual preferences.

Comment

One commenter recommends that persons in Alternative Service be able to keep the same job they had prior to classification so long as that job met the guidelines for Alternative Service. Another commenter said that Alternative Service should not be allowed to be a refuge from the rigors of military service, and that the duties to be performed in Alternative Service should not be the most attractive available in the civilian community.

Reply

The controlling factors are that the postions contribute to the maintenance of the national health, safety or interest and be of a civilian character. Selective Service would not be looking for attractive positions anymore than it would be looking for unattractive positions. Also, given the process to be followed in placing persons in Alternative Service, it would seem unlikely that Conscientious Objectors would be reassigned to the organization that they had worked for before entering Alternative Service. However, such assignments would not arbitrarily be ruled out.

TOPIC: ALTERNATIVE SERVICE TRAINING

Concept Paper: Suggests giving to all persons entering Alternative Service (1) information concerning citizenship obligations and Alternative Service as a concept, (2) information about the Alternative Service Program, and (3) possible training in first aid.

Comments

Comments were received to the effect that first aid training for all Alternative Service workers is compatible with the Conscientious Objector's concern for the preservation of life and providing assistance in time of disaster. Consideration of issues of equity and fairness as indicated by Congress suggest that some sort of "Basic Training" for Conscientious Objectors is in order.

Reply

No comment.

Comment

Several commenters have challenged the plan by Selective Service to set up a training program that would provide first aid training to Alternative Service workers, inform them of their citizenship obligations in Alternative Service, and orient them to the basic requirements of the Alternative Service Program.

Reply

In order for Selective Service to administer Alternative Service fairly and to treat Conscientious Objectors with dignity, it is essential that there be a clear understanding between the officials of the Alternative Service Program and the Conscientious Objectors as to their respective rights and responsibilities in Alternative Service. While a curriculum has not yet been devised, it is clear that Alternative Service workers must receive a basic amount of information if their rights are to be preserved. Selective Service does not believe it is correct to assume that all entering Conscientious Objectors will be fully acquainted with the history of Alternative Service. The importance of the first aid training derives from the fact that the concept paper is geared to full mobilization following declaration of a national emergency. It is rather likely, under such circumstances, that a number of persons in Alternative Service would be called on from time to time to deal with nearby disasters — whether natural or manmade — and thus, it would be consistent with the humanitarian goals of Alternative Service that the Conscientious Objectors be given basic training in first aid. As with the rest of the Alternative Service Program, all such training would be totally in civilian hands.

TOPIC: ALTERNATIVE SERVICE FUNDING

Concept Paper: Suggests that the Federal Government fund Alternative Service work through a system of stipends or employer tax incentives.

Comment

Federal funding is needed to make sure that Alternative Service workers do not compete with the normal workforce.

Reply

This would likely be a derivative outcome of federal funding, but the primary benefit would be one of equity among Conscientious Objectors.

Comment

Several questions have been raised on both sides of the funding issue. One commenter asks whether employers would be required to pay Alternative Service workers. Another asks whether the government will subsidize employers for taking Conscientious Objectors into the Alternative Service Program. One commenter opposes Federal Government subsidies to Alternative Service work on the grounds that it could lead to a blurring of the separation between church and state. Another states that government funding of Alternative Service is essential in order to be sure that Alternative Service workers are not in competition with the normal workforce. This commenter says that government funding of Alternative Service would insure that Alternative Service work was clearly supplementary in nature. Another suggests that compensation for Conscientious Objectors be equivalent to that received by persons in the Armed Forces.

Reply

Selective Service holds the view that the separation of church and state would not be endangered by Federal funding of Alternative Service. For many years now, Federal funds have flowed to church-sponsored activities such as the Headstart Program, and this rather large flow of Federal money has not resulted in a blurring of the separation between church and state. Selective Service is concerned over the inequities that might ensue from requiring every employer to pay for the Alternative Service workers. The experience during the 1960's and early 1970's showed that Alternative Service workers received stipends or salaries at widely different levels, ranging from the prevailing wage, down to the minimum wage, down to a mere subsistence level, and even approaching completely volunteer or unpaid service for a few Conscientious Objectors. Selective Service believes that some kind of Federal financial support is necessary to insure equity.

Comment

A commenter suggested that the pay scales for those performing Alternative Service should not exceed the pay scales for individuals entering active duty military service.

Reply

Selective Service agrees with this comment. It should be noted that Selective Service plans to seek Congressional appropriations for the payment of persons in Alternative Service.

Comment

It was suggested that if government subsidy is provided for Alternative Service workers, then provision should be made to allow groups to refuse that subsidy and finance their own programs as they consider appropriate.

Reply

If some kind of government financing is provided for persons in Alternative Service, Selective Service would anticipate that such stipends would go directly to Alternative Service workers. The Alternative Service workers would, of course, be free to dispose of the money in any way they saw fit, but Selective Service is of the view that it would be unfair to Conscientious Objectors not to give them that option.

TOPIC: ALTERNATIVE SERVICE ADMINISTRATION

Concept Paper: States that Selective Service would retain all administrative and programmatic control over the Alternative Service' Program, that Conscientious Objectors would be processed completely at the local level by Alternative Service personnel, and that the overall management and monitoring of the program would be the basic responsibility of the Alternative Service Program National Headquarters.

Comment

A commenter recommended that Alternative Service be administered outside the Selective Service System as the military is.

Reply

It should be noted, first of all, that this would require a change in the law. The responsibility of Selective Service for military mobilization ends with the induction into the Armed Forces. That is not the case with Alternative Service. Here, the act requires the Director of Selective Service to find positions for Conscientious Objectors and to place them in Alternative Service assignments which are civilian in nature and which meet the national health, safety or interest.

If another agency were to administer Alternative Service, the same processes would have to be followed, and the same issues would arise.

Comment

A number of comments have been made alleging that Alternative Service would be under the control of the military or would be run by the military.

Reply

The concept paper contains no statement nor inference that Alternative Service would be directed or controlled by the military. Selective Service is a civilian agency, run by civilians.

In the event of an emergency, Selective Service might call on Selective Service reservists to organize draft operations around the country. Some of them could be involved in the administration of Alternative Service. Selective Service reservists, whether in inactive or active status, are at all times responsible to civilian officials of a civilian agency. They receive pay and benefits comparable to those of military reservists, but Selective Service reservists are in no way in the chain of command of the Armed Forces.

Thus, during the time a Conscientious Objector was in Alternative Service, he would at no time and in no way, be under the military chain of command.

Comment

It was suggested that Alternative Service be decentralized, as it was during the 1960's, with administrative independence given to sponsoring agencies and employers.

Reply

Selective Service agrees with the principle of decentralization and believes that the Alternative Service Program now being planned is one in which the decisions and actions would be taken at the lowest appropriate level. Selective Service further holds the view that the Alternative Service Program of the 60's was so decentralized that it resulted in the inequitable treatment of Conscientious Objectors. It is necessary to establish national standards and to provide for monitoring of the program through the National headquarters if equity is to be restored. SSS is not planning to ask any sponsors or employers to relinquish any administrative independence. For those choosing to participate in the Alternative Service Program, Selective Service would expect sponsors or employers to be responsible for the day to day supervision of Conscientious Objectors in performing their Alternative Service assignments. Selective Service, in its turn, would be responsible for those matters having to do with its legislative mandate. Thus, Selective Service would be responsible for seeing to it that Alternative Service positions were of a non-military character, were in the national health, safety or interest, and that Conscientious Objectors completed their full two years of service.

Comment

One commenter said that the Director of Alternative Service should be a Conscientious Objector who has completed Alternative Service.

Reply

To limit the choice of Director of Alternative Service to someone who had been a Conscientious Objector would be to exclude all women and a number of eligible men. Selective Service would want to select the best person for e job.

TOPIC: ADVISORY & COORDINATING COMMITTEE

Concept Paper: States that in order to assist in its work and provide communications link, Selective Service would invite a number of Federal agencies to sit on a Coordinating Committee and would invite a number of other organizations and individuals interested in Alternative Service to participate in an Advisory Committee.

Comment

One organization asks to be represented on the Advisory Committee and another refuses participation.

Reply

Selective Service has not as yet extended any invitations to any individual or organization to join the Advisory Committee.

Comment

A few commenters suggested that there be at least one local Advisory Committee for Alternative Service in each community that has a Selective Service Board, and that that Committee monitor the local Alternative Service Program to see that it is carried out in the spirit and intent of the regulations concerning Alternative Service.

Reply

Selective Service plans to have advisory boards at the national level only as a policy sounding board. To have them at each local board would be cumbersome and unworkable.

TOPIC: PUBLIC RECOGNITION OF ALTERNATIVE SERVICE

Concept Paper: Says that Selective Service would seek to inform the public on Alternative Service and to publicly recognize the contribution of Alternative Service workers.

Comment

A few commenters said in effect, "We appreciate these plans for recognizing Alternative Service because it has been misunderstood in the past. The public should be made aware that the Conscientious Objector is merely taking the lawful and ethically equal, if not superior, option to that taken by the individual who accepts induction."

Reply

While not in the business of expressing ethical judgments, Selective Service agrees that the position of Conscientious Objectors is completely within the law.

TOPIC: OTHER CONTINGENCIES

Concept Paper: Says that plans are limited to a draft in the event of mobilization.

Comment

Several commenters have noted that the Alternative Service Concept Paper is geared to a full mobilization following a declaration of a national emergency. The question has been raised as to how the Alternative Service Program would be affected if there were to be a peacetime draft, a National Service Program, or the registration of women.

Reply

The Alternative Service Program would be unchanged in peacetime, although it might be of a different size. The questions of national service and the registration of women are outside the purview of Selective Service and would be addressed only if directed to do so by the Congress.

TOPIC: PASTORAL CARE FOR CONSCIENTIOUS OBJECTORS

Concept Paper: Makes no mention of pastoral care for persons in Alternative Service.

Comment

Several commenters noted the importance of providing "pastoral care for our young men in Alternative Service."

Reply

Probably in most cases, Conscientious Objectors would be near enough to places of worship and to pastors, priests, and rabbis to be able to participate regularly and to receive pastoral care. In those instances where this could not happen regularly, Conscientious Objectors might attend other religious institutions and consult with other pastors. Also, religious organizations might be encouraged to communicate with their members periodically by mail and by telephone.

TOPIC: APPEALS PROCESS

Concept Paper: Makes no mention of an appeals process.

Comment

Several commenters said that a Conscientious Objector should have a right to appeal his placement in a job he feels is against his conscience.

Reply

Due process will be accorded to all persons in Alternative Service. The appeals process will be spelled out in the Alternative Service Regulations.

ALTERNATIVE SERVICE CONCEPT PAPER

SELECTIVE SERVICE SYSTEM—JUNE 1981

INTRODUCTION

Following a long tradition in U.S. History, the Military Selective Service Act imposes a citizenship obligation for military service. All men, aged 18 to 26, are subject to be called for training and service in the Armed Forces. Within this citizenship obligation, the Act, as interpreted by the Supreme Court, recognizes that there are individuals whose religious, moral or ethical beliefs prohibit them from participating in any type of warfare. Thus, under the Act, Conscientious Objectors are exempted from military service, but must, in lieu of induction, fulfill their citizenship obligation by performing "such civilian work contributing to the maintenance of the national health, safety or interest as the Director may deem appropriate". The Director of Selective Service is specifically charged with the responsibility "for the placement of such persons (Conscientious Objectors) in appropriate civilian work". (50 U.S.C. App. 456 (j))

This paper presents a concept for an Alternative Service Program whereby the Director of Selective Service can insure that Conscientious Objectors will meet their obligations through their placement in civilian jobs contributing to the national health, safety or interest. The concept embraces a confluence of jobs appropriate for alternative service, civilian workforce priorities, and individual skills and interests in an efficient and systematic way which will treat Conscientious Objectors fairly and with dignity.

PROGRAM STRUCTURE

The Alternative Service Program for Conscientious Objectors would operate under a structure which would provide for the interaction of three primary program components. These are:

1. Jobs

   The Alternative Service Program would identify specific job openings which meet eligibility standards for Alternative Service.

2. Priorities

   The Alternative Service Program would identify areas of crucial civilian workforce shortages and set placement priorities.

3. People

   The Alternative Service Program would determine the interests and abilities of participating Conscientious Objectors and match them with jobs contributing to the national health, safety or interest.

Jobs

Alternative Service jobs would have to meet the legislative criteria of being civilian in character and of contributing to the maintenance of the national health, safety or interest. While national interest cannot be tightly defined because it varies from time to time, it is possible to give examples of jobs that qualify for alternative service, and others that do not. Food production, conservation, caring for the very old and the very young, educational projects and health care are among those that would qualify for alternative service as being civilian in character and as contributing to the national health, safety, or interest. Producing the weapons of war, loading munitions on ships or trains, working in defense industries, and taking up arms would be excluded from alternative service on the grounds that they would not be civilian in character.

In order to identify public agencies, private and religious organizations which would be prepared to sponsor Conscientious Objectors, the Alternative Service Program staff will undertake a series of discussions with such potential sponsors in advance of mobilization. These organizations will be encouraged to develop employment programs for Conscientious Objectors. The programs would have to meet guidelines established by Selective Service to insure that all jobs in the programs would contribute to the national health, safety or interest and be appropriate for alternative service. Selective Service and sponsoring organizations would develop agreements which would include provisions for compensation, placement, and monitoring, so that the employment programs would be ready to operate and accept Conscientious Objectors shortly after a mobilization.

Unless otherwise specified in the agreement, sponsoring organizations could interview Conscientious Objectors before finally accepting them. Sponsoring organizations could insist on a certain set of qualifications or standards of behavior, but it could not discriminate on the grounds of race, religion, sex, or national origin.

The listing of approved job openings would be derived from job openings submitted to the regional offices. Job openings submitted to the regional offices for evaluation would come from several different sources. Liaison activities between local Selective Service System offices and State Employment Security Agency offices could provide a broad source of job openings. Local Alternative Service office contacts with state and local governments, health and service organizations would also provide a source of available jobs. Additionally, job openings in Federal agencies could be identified through the Office of Personnel Management and the respective agencies. Following the evaluation for appropriateness to alternative service, a job description would either be deemed acceptable, and subsequently entered into the data files established for approved job descriptions, or unacceptable, in which case it would be dropped from the program.

Job openings submitted for evaluation by the various sources would be entered into the data banks through terminals located at designated Alternative Service offices. The data system, established to maintain the Alternative Service Program information files, would consist of a data bank at the national level with input coming from and output flowing to the designated district and regional Alternative Service offices. The data system would provide various types of output; output about all Conscientious Objectors who are or were involved in the program and data about the jobs available and unfilled, and those jobs already filled in the program.

The job identification and development function could receive assistance from FEMA, the Office of Personnel Management, Department of Labor and Selective Service System National Headquarters to encourage employers experiencing workforce shortages to submit their job openings. Additionally, the Department of Labor would serve the Alternative Service Program by facilitating a cooperative effort between the Alternative Service district area offices and the State Employment Security Agency offices in identifying potential job placements.

Priorities

Alternative Service would be performed by Conscientious Objectors in lieu of induction into the Armed Forces, therefore, the program would be functioning whenever inductions are occurring. It is expected that shortages in the civilian workforce would develop as large numbers of young people enter military service, and industrial needs place new stresses on the labor market. These circumstances would create a need for national and regional resource and workforce management. Selective Service would obtain from the Federal Emergency Management Agency, the Department of Labor and other Federal agencies, information pertinent to setting priorities among civilian work gaps.

Selective Service National Headquarters would be responsible for overall management and coordination with FEMA and the other agencies. On the regional level, the Selective Service System would review employment priorities as they are channeled down from the National Headquarters. An evaluation of job descriptions submitted to the regional offices would be conducted based on the employment priorities. In addition, the regional Alternative Service office would conduct operational evaluations of the Alternative Service work programs within the region.

People

A viable and successful Alternative Service Program matches the abilities and interests of Conscientious Objectors with the approved job openings. Conscientious Objectors would have an opportunity to describe their abilities and interests in advance of the job matching process. Potential job placements would be made from the job bank. Conscientious Objectors could be placed in individual job openings or in approved group work projects. Requests by Conscientious Objectors for particular jobs would receive due consideration; any such jobs not yet approved for Alternative Service would have to be so approved before placement could be effected.

Unlike virtually all other placement agencies, Alternative Service would perform no recruitment functions whatsoever. It would not be the function of the Alternative Service Program to find Conscientious Objectors for all the workforce shortages that may exist in an emergency. Rather, it would be the job of the Alternative Service Program to place everyone who was classified as a Conscientious Objector in an alternative service job which contributed to the maintenance of the national health, safety or interest.

Alternative service personnel would be responsible for giving to persons entering Alternative Service (1) information concerning obligations under the Military Selective Service Act and alternative service as a concept and (2) information about the Alternative Service Program, including pay, leave, duration of service and medical coverage.

Alternative Service would seek to maximize the Conscientious Objector's job retention. It is anticipated that most Conscientious Objectors would remain with their employers throughout their terms of service. In case emergencies arise, it may be necessary to transfer temporarily some Conscientious Objectors to meet such emergencies.

The job training and day-to-day supervision of Conscientious Objectors in the program would be the responsibility of the employer. Both the employer and the Conscientious Objector would have reporting requirements to Alternative Service.

In the placement and oversight of Alternative Service work projects, Alternative Service would seek ways to insure that both the participants and the public are aware that Alternative Service is a necessary and legitimate fulfillment of the Conscientious Objector's obligation as a citizen. Alternative Service Program representatives would visit work sites to maintain close contact with Conscientious Objectors. Employers and beneficiaries of alternative service work would be encouraged to publicly recognize the contribution of the program.

ADMINISTRATION

Since placing Conscientious Objectors is a necessary component to Selective Service's mission, Selective Service must retain all administrative and programmatic control over the Alternative Service Program. To promote efficiency and accountability, the Alternative Service Program would be administered at the local level by Alternative Service personnel in designated district offices.

In order to meet its responsibility in a timely fashion, Selective Service will explore possibilities for the rapid processing and placement of Conscientious Objectors. A number of pre-mobilization agreements between Selective Service and sponsoring organizations will be arranged to provide for the guaranteed placement of persons entering Alternative Service.

In addition to their job placement function, Alternative Service personnel would be the primary adminstrative contact for both participating employers and working Conscientious Objectors within the area of jurisdiction. The Alternative Service personnel would continue to be the contact points for Conscientious Objectors throughout their service. Alternative Service personnel would be responsible for initiating and maintaining the files of Conscientious Objectors involved in the program. They would handle travel arrangements and payments to Conscientious Objectors. Additionally, Alternative Service personnel would be responsible for receiving reports from and monitoring participating employers. Selective Service regional offices would provide administrative and logistical support to Alternative Service personnel. Operational evaluation of the Alternative Service Program placements within the regions would be conducted by Alternative Service officials.

At the national level, the Alternative Service Program would initiate all administrative policy, establish the necessary guidelines to enable individual employers to supervise the Conscientious Objectors under their authority, and would provide overall management and monitoring of the program.

As a program designed in part to help alleviate civilian workforce shortages in a national mobilization, it is crucial that the Alternative Service Program be designed to insure a rapid and efficient placement of workers to priority areas. The Alternative Service Program must be able to stimulate employers to participate. Moreover, the Alternative Service Program must be able to guarantee the timely placement of Conscientious Objectors. For these reasons, the Federal Government must consider funding alternative service work. The level of payment received by Conscientious Objectors would equal minimum wage providing it did not exceed that for persons entering active duty military service.

ADVISORY AND COORDINATING COMMITTEE

The participation of a number of Federal agencies on a standing coordinating committee is a viable means of providing the coordination and input needed in implementing the Alternative Service Program. Policy and guidance established by the Selective Service System would be presented to the committee agencies for dissemination. The committee would also provide the agencies with a contact point for expressing both workforce needs and input for priority determinations in meeting those needs. The agencies involved would include, but not be limited to, Selective Service System, FEMA, OPM, and the Department of Labor. The Selective Service System would form and chair the coordinating committee.

In addition to a Federal Coordinating Committee, it would be advantageous to have an advisory committee on alternative service. Employers and individuals interested in Conscientious Objectors and Alternative Service could be represented on the committee.

SUMMARY

The Director of Selective Service is required by law to place Conscientious Objectors in appropriate civilian work. This paper sets forth a conceptual framework within which Conscientious Objectors can meet their Alternative Service obligations with fairness and dignity.

The framework is constructed from a tripod consisting of jobs, priorities, and people. Conscientious Objectors would make a civilian contribution by working in areas of national importance. Most of the actual jobs in Alternative Service would be generated locally as a result of extensive contacts betwen District Alternative Service officers and a host of private, public service organizations and with public agencies.

Finally, Conscientious Objectors would be placed in public service jobs appropriate to their interests and abilities. The placement process would be assisted by a job data bank which would also maintain a continuing profile of Alternative Service jobs and people.

Such an Alternative Service Program would fulfill the Selective Service Director's responsibility under the law; would contribute to the nation's health, safety and interest in a critical time; would render humanitarian assistance that would otherwise be neglected; and would sustain the faith of those who defend the nation.

LETTER FROM CHARLES L. BOYER, CHAIRPERSON, NATIONAL INTERRELIGIOUS SERVICE BOARD FOR CONSCIENTIOUS OBJECTORS

September 27, 1981

Dr. James G. Bond
Acting Director
Selective Service System
National Headquarters
Washington, DC 20435

Dear Dr. Bond,

Through the courtesy of Mr. Edgar Metzler, the Associate Secretary of the Mennonite Board of Congregational Ministries, we have obtained a copy of the Selective Service's summary of the comments received on the Alternative Service Concept Paper. We are taking this opportunity to express our opinion because we feel strongly that the summary is a seriously flawed document.

The summary uses comments which were favorable towards the Concept Paper to give the impression that the Concept Paper found general acceptance, despite the fact that most of these favorable comments were deliberately solicited by Selective Service staff from groups which are known to be prejudiced against conscientious objectors.

One such comment, which begins,"Dear Bernie," in apparently friendly reference to the former Director of Selective Service, declares that church groups should not be allowed to participate in alternative service programs, and even suggests that churches not participate in comments on the Concept Paper itself. The right of freedom of religion has been guaranteed since the founding of this nation. We suggest that the views expressed in such a comment are undermined by such ignorance of the Constitution of the United States.

Another comment warns that "anti-military groups" such as "ACLU, CARD, Clergy and Laity Concerned, etc." will argue on behalf of COs, and goes on to suggest that as an example of what would be acceptable alternative service would involve an administrative position with the National Council of Churches (perhaps this is another subversive group in the opinion of the commentator) with an additional 40 hours weekly janitorial duty in a church or hospital. The comment suggests such a regime "begins to approach basic training." This comment begins, "This letter is in reply to your January 26th request to (name withheld), Executive Director of the (withheld) Washington office, for our comments on the concept paper..."

Other favorable comments were quoted out of the context of the generally unfavorable reviews of the Concept Paper in which they were offered. In a section of the summary entitled "Topic: Basic Concept for Alternative Service," Selective Service claims that "(s)everal commenters said that Selective Service is to be complimented on producing a paper that is a clear statement of a reasonable policy. 'Thanks to you and your colleagues for being concerned with the inconsistencies and misconceptions of alternate service during the 1960's and for working to solve some of the problems. The concept paper leaves the impression that the Conscientious Objector is an individual concerned with the welfare of society and not a "slacker".'"

The first sentence of that quote from the summary is a deliberate distortion of my words in a December 16 letter to Dr. Donald Eberly, which was not even offered as a comment on the Concept Paper. My letter clearly implicates the Selective Service System's local boards as the originators of misconceptions and inconsistencies. The summary misquotes my letter and implies that conscientious objectors themselves were responsible for these problems. The summary then attaches a second sentence to the sentence from my letter; that second sentence quotes another letter written by persons unknown. Even that sentence, beginning "The concept paper leaves the impression..." was offered in a letter which goes on to say, "I understand that....(NISBCO) has given you several reservations about the paper and I agree with them..." (our emphasis).

We object strongly to falsehoods of this kind, and we are upset with the deliberateness with which they seem to be perpetrated. This is a clear example of abuse of the rulemaking/public comment process, when generally negative comments are construed as positive, or as affirming a concept paper which has received no great support among those most affected by that paper. We object to such fabrication of quotations, and we hope that in the interests of fairness and honesty this quotation is corrected to more accurately reflect the opinion of the comment writers.

Similarly, the summary implies heavily that a single comment was received which suggested that Selective Service not administer the Alternative Service Program. In fact, no fewer than seven comments were received by Selective Service to that effect.

It is also a fact that of the sixty-two (62) letters and statements released to NISBCC because of a Freedom of Information Act request, fifty-three (53) had serious questions about the fairness and efficacy of the proposed Alternative Service Program. Notone of these fifty-three comments were directly solicited by the Selective Service System.

The summary mentions several of the negative criticisms which Selective Service received, and in every case defended the Concept Paper and put forth no proposals for substantive change. For example, the summary points out that "(a) number of comments have been made alleging that Alternative Service would be under the control of the military or would be run by the military." (Fourteen comments were received which mentioned this.)

Without apparently realizing that in their own words they supported these comments, Selective Service replied, "The concept paper contains no statement nor inference that Alternative Service would be directed or controlled by the military...In the event of an emergency, Selective Service might call on Selective Service reservists to organize draft operations around the country. Some of them could be involved in the administration of Alternative Service..." (emphasis ours).

It is inconceivable that in the matter of conscientious objection, which is a basic right of every American and has everything to do with freedom of religion, that any United States government agency can be so insensitive not to recognize that this plan for the use of such reservists is abhorrent to conscientious objectors.

Thirty-two (32) comments were received objecting to the Alternative Service Program's reliance on the use of job priorities as designated by the Federal Emergency Management Agency (FEMA). Inasmuch as FEMA has specific defense responsibilities in the event of a mobilization, and is staffed in part by military personnel, conscientious objectors are prohibited by their consciences from cooperating with it. It is apparent from this summary that Selective Service does not realize conscientious objectors will have nothing to do with mobilization, support for a mobilization, and filling crucial workforce shortages which are caused by any mobilization. By pledging to go along with such a plan, COs and CO groups would be pledging support for those who mobilize the nation for war. In spite of the statement in the summary, it is not appropriate for the Alternative Service Program to look to FEMA for any advice at all.

Seventeen comments were received by Selective Service recommending that COs be allowed, as they had been up to the end of inductions in 1972, to find their own alternative service jobs within a reasonable amount of time. In the summary, Selective Service meets these comments by attempting to hide behind the Military Selective Service Act, which does not allow Selective Service to "delegate to another party, including the Conscientious Objector, the responsibility of placement," according to the summary.

However, according to the Conference Report on PL 92-129, which amended the MSSA in 1971, "(t)he Senate conferees accepted this amendment" (which allowed for "assignment and monitoring of conscientious objectors to alternate service by the Director of Selective Service") "with the understanding that the Director of Selective Service may draw heavily on the experience and the recommendation of the local boards and State Directors in assigning conscientious objectors to alternate service and that local arrangements under which alternate service is now performed with religious and other organizations will not be needlessly disrupted." This amendment was intended to solve the problem of local draft boards refusing to approve alternative service jobs found by COs themselves, creating a backlog of COS waiting to begin their assignments. Case law eventually forced local boards to grant approval more quickly; it is clear that the amended Act was never intended to produce such a system as the Concept Paper describes.

If the free exercise of religion will be allowed at the time of a mobilization, then more consideration will have to be given to the churches whose members live in intentional communities. Many representatives of such churches have met with Selective Service officials and received assurances that none of their young men would be removed from their pastoral care, according to at least one comment, and documents on file at the NISBCO office. Those assurances are not reflected in the Concept Paper, nor in the summary of the comments concerned with those assurances.

The reply to the comments concerned with pastoral care is harsh, and insensitive to the needs of young men who live in intentional communities , especially. They cannot reasonably be expected to receive pastoral care at "other religious institutions," as the summary suggests, and Selective Service should know enough to show more consideration than this.

The summary showed similar insensitivity to the seven comments on the Concept Paper's suggestion that Alternative Service should "sustain the faith of those who defend the nation." Those seven comments point out that such phrases demean the patriotism of conscientious objectors. The summary's glib reply is both patronizing and gratuitous. A citizenship oath which takes place outside the framework of a mobilization is not analogous to the Concept Paper. It is obvious that the phrase "those who defend the nation" refers to the faith of those who choose to go to war, and it should be just as obvious that conscientious objectors have no intention of sustaining such faith, or they would not be conscientious objectors in the first place.

It is clear from the foregoing that the problems of the Alternative Service Concept Paper spring from a profound lack of knowledge of conscientious objection on the part of Selective Service, and from a disheartening insensitivity toward COs.

We urge that Selective Service produce a completely revised Concept Paper, which would bring the proposed Alternative Service Program more in line with past practices and current comments. We continue to hope that an ongoing dialogue between Selective Service and conscientious objectors and NISBCO, in particular, will produce a greater awareness of what conscientious objection is, and lead to a higher level of fairness on the part of Selective Service toward COs.

Sincerely yours,

Charles L. Boyer

Charles L. Boyer
Chairperson

Letter From Donald J. Eberly, Alternative Service, Selective Service System

February 4, 1982

Mr. Shawn Perry
Associate Director
NISBCO
550 Washington Building
15th and New York Avenue, N.W.
Washington, D.C. 20005

Dear Shawn:

Dr. Bond has given me your January 25 letter for reply. Yes, we are still following the Alternative Service Concept Paper as the basic guide in the development of an Alternative Service Program.

Also, we would like to hear from religious bodies interested in providing alternative service employment.

Sincerely,

Donald J. Eberly
Alternative Service
(202) 724-0003

National Aeronautics and Space Administration

STATEMENT OF JAMES L. ELLIOT, ASSOCIATE PROFESSOR OF ASTRONOMY AND PHYSICS, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, ON BEHALF OF THE DIVISION OF PLANETARY SCIENCES OF THE AMERICAN ASTRONOMICAL SOCIETY

Senator Garn. Mr. James L. Elliot, associate professor of astronomy and physics at MIT.

Mr. Elliot. Mr. Chairman, as planetary scientists, we are gravely concerned about the future of our national enterprise to explore the planets. The administration's cuts for fiscal year 1983 place the budget for planetary exploration $40 million below the minimal level for a viable research effort in planetary science. If this budget is implemented: (1) unique facilities will be closed; (2) spacecraft returning valuable data will be turned off; (3) data already received will sit unanalyzed; and (4) grants to first-rate research groups will be canceled, forcing them to disband in some cases. We do not believe this course of events to be in our national interest.

I would like to talk first about the goals and benefits of planetary exploration, and say, first of all, per se, this exploration is basic research which is a long-term investment and lays a foundation for applied research for development of methods and products of direct economic benefits to society.

The payoffs from basic research are long term and unpredictable. We know from past experience, from 200 years of research in physics, we do get good payoffs from basic research. Some examples of payoffs we might expect is to learn about more things that affect us on Earth. Some time we might be mining minerals from asteroids. But I can't make those predictions.

Planetary exploration is closely connected to research in earth sciences and astronomy. There have been several benefits from planetary exploration. We have the scientific benefit; our knowledge has increased tremendously. I remember as a child doing reports on planets for school and I would find just a few pages in an encyclopedia about Mars, most of which was wrong. Now we need a small library to contain our knowledge of the planets.

I think we can take pride in the achievement of our planetary program. I think it has provided an inspiration for our youth. I go to speak to my kid's class at school, and the kids have many questions and are very curious about our solar system.

It has also been a great challenge. I think engineers and scientists and people in technical fields like to be challenged to do things of the utmost capability. Our planetary programs certainly provide those challenges.

The question is, What is the minimum program for planetary exploration? We need certainly a critical mass in this area to do the job. Now, the planetary missions are the centerpiece of the program and we need, perhaps, a few per decade to keep that critical mass going. Over the past few years we have seen the postponement or outright cancellation of several planetary missions. Perhaps the most conspicuous of these is a mission to Halley's comet when it returns in 1986. No American spacecraft will visit the comet, but other countries have such plans—the Europeans, Japanese, and Russians.

Right now, what we have to look forward to is our first detailed look at Uranus and Neptune from the Voyager 2 spacecraft, which are a bonus because the spacecraft weren't designed to last that long. Also the Galileo mission, which has yet to be launched.

I would like to address a bit the impact of the budget cuts. The budget cuts proposed by the administration amount to an abrupt change in our national policy; away from a commitment to explore the planets and toward the dismantling of our facilities and research groups to do the job. The details of what NASA proposes to do with this is in an appendix to my testimony. We have another quarrel, particularly with what they have done, because if you cut the backbone of these programs you will have to cut something else to save fiscal constraints. One particular item that I would use is the infrared telescope facility in Hawaii. This is the best telescope for infrared wavelengths because it is located at a 14,000-foot altitude. The proposed budget cuts would cause this facility to be closed. This is one of many examples of forced termination of an important research program before the potential scientific return on the investment has been realized. For example, in the universities our students were involved in these research programs. Fiscal 1982 involved about a 10- to 20-percent cut for this type of work. So, for example, this summer some of the undergraduates won't be working with me because we don't have the money to support them.

In summary, I would say our national enterprise of exploring the planets has, and should continue, to produce many scientific, economic, and other benefits. We do not believe it should be dismantled. To continue at a minimum level requires restoring the $40 million budget cut, which would be an investment for our country with a high rate of return.

I thank the committee for listening to my views on planetary exploration. I would be happy to answer any questions you might have.

Senator GARN. Thank you.

One of the areas you are recommending for additional funding is advanced programs. Could you outline for me what specific activities would be undertaken with the additional $5.1 million you are suggesting be restored in this area?

Mr. ELLIOT. Which particular programs?

Senator GARN. Well, you recommended additional funding for advanced programs. I was wondering what specific activities you would suggest be undertaken with the additional $5.1 million which you are asking for under advanced programs.

Mr. ELLIOT. This was prepared by our subcommittee, and I could get the answer for that. I don't have those particular ones here.

Senator GARN. I would appreciate it if you could supply that for the record.

[The information follows:]

ADVANCED PROGRAMS

Advanced programs supports the studies necessary to define the engineering required and the scientific scope of a mission before it can become an approved mission. Also, advanced programs should be supporting research in advanced technology for sensors to provide more sensitive instruments for use on future planetary missions.

In the planetary program, Galileo is the only approved mission yet to be launched. If we are to have a program of planetary missions that continues after Galileo, these funds are needed for (1) the Venus Mapper (next in line, projected for a new start in fiscal year 1984 and launch in the late 1980's), and (2) advanced studies of the new mission concepts that will soon be proposed by the Hinners committee (solar system exploration committee). We can give an approximate breakdown of the budget for fiscal year 1983 for three different cases—(1) the administration's proposed subminimal budget; (2) the minimal budget that follows fiscal year 1981 corrected for inflation; and (3) the budget of a healthy program. Of course, NASA, not us, would decide how the funds would be allocated.

BREAKDOWN OF ADVANCED PROGRAMS BUDGET FOR FISCAL YEAR 1983

[In millions of dollars]

	Subminimal	Minimal	Healthy
Venus Mapper	$4.5	$5.5	$6.0
Advanced studies:			
SSEC recommendations		2.5	5.0
Base program	1.0	2.0	4.0
Advanced technology		.6	1.0
Total	5.5	10.6	16.0

In these difficult times we are requesting only that you restore the budget only to its fiscal year 1981 equivalent of $10.6 million. Without adequate support in this area, new planetary missions become automatically precluded.

CONTINUED EXPLORATION URGED

Senator GARN. As you well know, this is an area that is under quite a bit of controversy, and I am one who shares your view. I think we should continue that exploration. I think it is a mistake to cut it back. However, you get into the argument of, "Well, we should spend money here on Earth." I wish people who make that argument would look at the tremendous benefits that have accrued here on Earth as a result of our space program. There are things people use every day of their lives that simply would not have been developed, at least not for a number of years, had we not had the space program.

Thank you very much. I have no further questions. Without objection, your prepared statement will be included in the record at this point.

Mr. ELLIOT. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF JAMES L. ELLIOT, ASSOCIATE PROFESSOR OF ASTRONOMY AND PHYSICS, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

As planetary scientists, we are gravely concerned about the future of our national enterprise to explore the planets. The Administration's cuts for FY 83 place the budget for Planetary Exploration $40 million below the minimal level for a viable research effort in planetary science. If this budget is implemented: (i) unique facilities will be closed, (ii) spacecraft returning valuable data will be turned off, (iii) data already received will sit unanalyzed and (iv) grants to first-rate research groups will be cancelled--forcing them to disband in some cases. We do not believe this course of events to be in our national interest.

Goals and Benefits of Planetary Exploration

As a scientific enterprise, planetary exploration is carried out by a diverse group of scientists: astronomers, chemists, geologists, mathematicians, meteorologists and physicists. Our main goals are to understand how our solar system formed and the physical processes at work on the planets today. As an example, we would like to know why our earth turned out to be so hospitable to life, unlike any other planet, and how long it should remain so. This work is basic research, which lays the foundation for applied research, and finally to the development of methods and products of direct economic benefit to society.

The payoffs from basic research are long-term and unpredictable. As an example, we might expect that our studies of the planets could lead to significant improvement in our ability to predict weather and climatic changes on Earth; and we may find sources of valuable minerals in the asteroids. Basic research in planetary science is closely related to basic research in the earth sciences, as well as astronomy, and will undoubtedly remain important to our economy and possible military activities in space.

To date, the benefits derived from our planetary exploration program include:

- Vast increases in our scientific knowledge of the planets - Twenty years ago, all we really understood about the planets could be contained in a few pages of an encyclopedia; now, our knowledge requires a small library to contain it.
- Pride of national achievement - The success of our planetary missions has demonstrated to the world the superiority of American management and technology.
- Inspiration - Our exploration of the planets has provided inspiration to our society - particularly our youth - and through it we are leaving a lasting mark on the course of civilization.
- New technology developed to meet the weight and reliability requirements of long planetary missions has become important to our economy--particularly in the area of electronics and computers.

What is the Minimum Program for Planetary Exploration?

The ingredients of our highly successful planetary exploration program have been (i) a timely series of space missions that return high quality data from a diverse set of observing instruments; (ii) a variety of ground-based observatories, laboratories, and other facilities; (iii) an adequate number of scientists from the several disciplines mentioned earlier, highly committed to their work, who define and carry out the scientific investigations performed by the spacecraft and ground-based facilities.

Over the past few years we have seen the postponement or outright cancellation of several planetary missions. Perhaps the most conspicuous of these is a mission to comet Halley, when it returns in 1986. No American spacecraft will visit the comet, but other countries have such plans: the Europeans, Japanese and Russians.

Right now, from U.S. spacecraft, we can look forward to our first detailed look at Uranus and Neptune, when the Voyager 2 spacecraft encounters these planets in 1986 and 1989. I should point out these encounters--if Voyager 2 continues to function--will be a bonus, since the design lifetime of Voyager 2 included only the Jupiter and Saturn encounters. We are also anticipating the exciting data from the first atmospheric probe of Jupiter and the close encounters of its satellites by the Galileo spacecraft, scheduled to be launched in 1985.

After this, no mission is currently planned. Hence, planetary exploration is already headed for a "drought" after the Galileo encounter in 1990, since the timescale for a mission from beginning to encounter is typically a decade. To maintain the momentum of planetary exploration, we need active spacecraft--perhaps a few launches per decade is the minimum that would sustain the "critical mass" of scientists, technicians and engineers who do this work. Right now, a committee headed by Noel Hinners is studying a new strategy for more frequent, but cheaper planetary missions. A minimum program also requires ground-based facilities and support for data analysis, laboratory and theoretical studies. These activities are needed both to support and complement the spacecraft missions.

Impact of the Budget Cuts

The budget cuts proposed by the administration amount to an abrupt change in our national policy: away from a commitment to explore the planets, and toward the dismantling of our facilities and research groups to do the job. The details of how NASA proposes to apportion the reduced budget and their specific impacts are given in the Appendix, which was prepared by our Executive Committee. To illustrate what is happening, let me discuss one specific example, the Infrared Telescope Facility (IRTF). This telescope was specially designed to work at infrared wavelengths and is located at Mauna Kea Observatory on the island of Hawaii. The observatory site is at 14,000 ft. altitude, and, because of its altitude, it is the best ground-based observatory in the world for infrared wavelengths. The telescope has been in operation only two years, and yet is scheduled to be closed because of lack of funds to operate it. This is just one of many examples (see Appendix) of a forced termination of a facility or research program before the potential scientific return on the investment has been realized. If it should become our policy to cease planetary exploration, then it would make sense to phase out the facilities in a planned manner, rather than abruptly cutting them off.

Viewed in a different context, the severe cuts proposed for planetary science would be another negative impact on the R&D capability of our laboratories: government, private and university. In the latter case, the cuts will adversely affect education, since many graduate and undergraduate students are active participants in current research programs.

Summary

Our national enterprise of exploring the planets has, and should continue, to produce many scientific, economic and other benefits. It should not be dismantled. To continue at a minimum level requires restoring the $40 million budget cut, which would be an investment for our country with a high rate of return.

I thank the committee for listening to my views on planetary exploration.

APPENDIX

IMPACT OF THE ADMINISTRATION'S FY 83 BUDGET PROPOSAL FOR PLANETARY RESEARCH AND REQUIRED RESTORATIONS

Prepared by the Executive Committee, the Division of
Planetary Sciences of the American Astronomical Society
(Michael J.S. Belton, Clark R. Chapman, Laurel Wilkening)

The attached table lists the FY 81 budget line items for the Mission Operations and Research and Analysis parts of the NASA planetary program. Also shown are the budget levels proposed for FY 83 by the Administration. The final column represents the restorations we believe are required to stabilize the base programs at a minimally adequate level. We take FY 81 as the base year because many of the cuts proposed by the Administration last autumn were subsequently implemented in the present FY 82 budget, which we believe is inadequate.

I. MISSION OPERATIONS: $15 MILLION RESTORATION

Voyager Extended Mission

NASA had intended to begin Jupiter and Saturn Data Analysis Programs to support continuing analysis by the Voyager science teams and to open the vast wealth of new Voyager data to the wider community of planetary scientists. $4 million was to be budgeted for Jupiter, another $4 million for Saturn. About half the money would have supported the Voyager teams, with the rest supporting the broader scientific community. But the FY 83 proposal provides only 75% of intended support for the Voyager teams and just 25% to other scientists. A $4 million restoration is required.

Pioneer Venus Orbiter Operations

An extensive program of unique measurements by this spacecraft, now in orbit around Venus, has been planned to last until 1992, when the spacecraft will enter the Venusian atmosphere. It can measure the interaction of the planet with its space environment, the planet's gravity, and the cloud motions in ways not possible earlier in the mission. Special measurements during re-entry are planned for 1992. The zero-dollar budget means the spacecraft must be turned off permanently by 1 January 1983 (it could never again be reacquired), unless $6 million is restored.

Pioneers 6--11 Extended Missions

These spacecraft continue to send back important data about the solar system and interplanetary space. Pioneers 10 and 11 are traveling in opposite directions into the farthest reaches of the solar system. It is hoped that they will penetrate the "heliopause" and make the first direct measurements of the interstellar medium. For lack of just $2 million in the proposed budget, they would be turned off permanently on 1 January 1983.

Planetary Flight Support

Engineering efforts designed to assist ongoing mission activities (including upgrading computers and designing information systems for Galileo) would be cut back. About $3 million would partially restore this effort.

II. RESEARCH AND ANALYSIS: $25 MILLION RESTORATION

Halley's Comet Watch and Giotto Experiments

American is not sending a mission to Halley's Comet. But there is a program of ground-based observations plus a few American scientists participating on the European Giotto mission. Proposed cutbacks would incapacitate the Halley Watch Program and provide the Giotto experiments with less than minimally adequate funds. A restoration of $0.7 million is needed.

Basic Research Programs (Planetary Geology, Planetary Materials, Geochemistry-Geophysics, Planetary Astronomy, Planetary Atmospheres)

After slow erosion over several years and a 20% real cutback in 1982, these programs would suffer sharp further cuts in FY 83. Despite attempts by NASA officials to preserve the people in the scientific community, about 170 principal investigators would lose their funding. This would mean the loss from planetary science of many hundreds of first-rate scientists, research assistants, and students. Technical staffs would be curtailed or closed down, including the Infrared Telescope Facility in Hawaii.

The opportunity to understand a whole decade's worth of remarkable planetary data would be undermined. All five of these major scientific sub-disciplines of planetary science address fundamental issues as to how planets formed and evolved, how atmospheres and weather works, about how geological processes affect planetary surfaces such as the one on which we live. Such fundamental new understanding would be the real pay-off from the large investment American taxpayers made in the Mariner, Viking, Pioneer, and Voyager missions and in the state-of-the-art observatories and laboratories developed with NASA support. Much of the realization of that investment would be lost by decimating the research enterprise by further cutting back on these basic programs.

The restoration of $15.5 million, divided among the five programs as shown in the table, would enable this research effort to proceed at the 1981 level.

Advanced Programs

The future of the American planetary program depends on sophisticated scientific and engineering studies of future economical mission opportunities and spacecraft design. This effort needs a restoration of $5.1 million.

Mars Data Analysis Program

Despite the wealth of quite recent Viking data that has barely been looked at, this productive research effort would be totally shut off. It was supposed to be $3 million during the current year. After the stunning success of the Viking missions, America's sudden disinterest in Mars would be complete. Further research on Mars would be possible only at a minimal level, and only within the context of the basic research programs, which (as described above) are being sharply cut back themselves. A restoration of $2.4 million would support this program at the level originally intended for FY 83, which was already down from the FY 81 level.

Instrument Definition

It has long been recognized that a modest investment in new state-of-the-art instrumentation development could have rich rewards if applied in future missions. A restoration of $1.3 million would give this forward-looking effort some renewed vitality.

Mid-Level Facility

This particular item in the FY 82 budget is a one-time-only item that needs no additional funds in FY 83. The Infrared Telescope Facility itself should be supported under the basic research program in planetary astronomy, discussed above.

RESTORATION OF FUNDS REQUIRED FOR A VIABLE PLANETARY PROGRAM

Line Item	FY 81	President's Proposed FY 83	Required Restoration For FY 83
MSN OPNS & DATA ANALYSIS	61.8	26.5	+15.0
Galileo Operations	0.0	0.0	
Voyager Operations	25.7	0.0	
Voyager Extended MSN	3.3	14.0	+4.0
Pioneer/Venus EXT OPNS	4.7	0.0	+6.0
Pioneer/6-11 Extend MSN	2.0	0.0	+2.0
Helios Extended Mission	0.1	0.0	
Planetary FLT Support	26.0	12.5	+3.0
RESEARCH AND ANALYSIS	50.7	35.5	+25.0
Halleys Comet Watch/EXP	0.0	1.5	+0.7
Geology	4.8	4.0	+1.8
Planetary Materials	9.6	6.1	+5.5
Geochemistry	7.7	6.5	+2.8
Astronmy	7.0	5.5	+3.0
Atmospheres	5.4	4.1	+2.4
Advanced Programs	8.8	5.5	+5.1
Mars Data Analysis	4.4	0.0	+2.4
Instrument Definition	3.0	2.3	+1.3
Mid-Level Facility (IR Telescope)	0.0	0.0	

STATEMENT OF JERRY GREY, ADMINISTRATOR, PUBLIC POLICY, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

Senator GARN. Is Mr. George R. Wallace here?

Was he here with you, Mr. Elliot?

Is there a George R. Wallace in the room?

Mr. ELLIOT. That is the name of our observatory.

Senator GARN. Dr. Jerry Grey.

You didn't bring the observatory with you, did you?

Dr. GREY. No, Mr. Chairman, but I did bring the director of our Washington office with me.

Mr. Chairman, we would like, if possible, to place our statement in the record, and what I would like to do is summarize some of the high points of that statement.

The AIAA is a professional society of 32,000 engineers, scientists, and managers. We do not represent the industry; we represent the individual professional engineer. As such, we are proponents of a strong aerospace program. However, we are also responsible citizens. We recognize the budget cuts we are operating under today, and I would like to indicate that the general level of NASA support by the administration is quite in keeping with the level of restraint we have in the country today.

We feel that both the administration and the authorization subcommittee by its action a few days ago have been consistent with the fact that NASA is one of the few Federal investments in the future; that is, it is an investment by the Government which returns to the Government the money that the Government needs to sustain important and effective social programs. We cannot not spend on social programs, but we also can't not spend on investment programs because there is a payoff from those programs. We are delighted to see NASA has been received by the administration and the Senate in that light. The returns for NASA per dollar invested have been shown to be quite large.

Our statement, incidentally, deals with the rationale for these statements in general, and I will not repeat that here. What I would like to do is identify just a few specific items that appear in our statement with relation to the fiscal year 1983 NASA budget.

First, we support, in general, the authorization committee's approach that repricing of the Shuttle is a very important factor. We feel that the step they have taken to accelerate that repricing policy is a very good one. It does make available to NASA funds which have been squeezed out by the present economic basis upon which the Shuttle is being priced. We feel not only with regard to the Department of Defense, but eventually a repricing policy should be extended to all customers. We hope that does get accelerated.

We are very strong in supporting, as Mr. Elliot was, an increase in the physics and astronomy budget and the planetary science program of $40 million, which the authorization committee saw fit to recommend. We hope you will support that. In planetary exploration in particular, the administration's budget was a going-out-of-business-type budget. Turning off the Pioneers on their way out of the solar system is one of the worst things we can do. We are glad the authorization committee saw fit to support that.

Another extremely important program is the 30/20 gigahertz communications R&D effort. Overseas, that program is receiving tremendous emphasis by the Europeans. The Japanese are very active in this program as well. I see this in my role as deputy secretary general of the Unispace Conference. The developing nations are extremely concerned about the saturation of geostationary orbit, and the 30/20 gigahertz program offers an opportunity to use that orbit indefintely in the future without saturation. It is an important program globally, and I am delighted to see the authorization committee supporting a $20 million recommendation.

Technology utilization is another area. This is an area we are active in. It is inconceivable to us that an administration dedicated to the private sector taking a more active role has seen fit to terminate this program. We hope it will not be terminated. And we hope you will support funding for the fifth orbiter, for which the authorization committee has seen fit to include another $90 million.

We did a study about a year ago of the enormous growth in demand for the Shuttle. This, coupled with possible turnaround problems with the Shuttle which could come up as it becomes more active, make it essential to keep production rolling.

The Solar Max Mission is another one that we feel is an extremely important mission, not just for scientific purposes which is very important, but also for the ability to demonstrate the entirely new capability that the Shuttle gives us for the very first time to repair spacecraft in orbit. The fact that the spacecraft has already discovered a change in the solar radiation reaching the Earth is very important for all life on Earth today. I think it is a very good argument, scientifically, for maintaining that mission. It is an important one and we would hate to see it fail for lack of necessary support. We are pleased this committee reinstated some of the fiscal year 1982 money.

ADVANCED PROGRAMS

Again, you discussed this earlier. We feel it is an extremely important area. We feel that some of the authorization committee's funding support ought to go into advanced programs. Specifically, Mr. Chairman, as you asked the previous witness, we feel it is extremely valuable to have an ongoing program in space technology similar to that of the explorer program in science. Advanced programs is an effort of continually exploring new structural approaches, new methods of using the Shuttle, new methods of developing in orbit some of the advanced systems for the future. It has some of the preliminary funding for ultimate development of a manned space station.

The orbital transfer vehicle, we have said since 1971, is a key factor in all future Shuttle flights. That was 10 years ago. It is still true. The fact that the Shuttle's performance is limited by current interim orbital transfer vehicles is an unfortunate hindrance to such a very important system. The $150 million that has been reprogramed by the authorization committee is certainly a step in the right direction.

I have a few other minor items, but I would like to point out to you we have, in the last year or two, developed a new space policy recommendation. A preliminary copy was attached to our statement. I would like to leave the final copy for inclusion in the record.

Senator GARN. It will be included in the record.

Dr. GREY. Thank you very much. If you would delete the old one, there are a few changes in that.

I would like to leave the space program with one comment. Although it is not in this year's budget, we hope the phase B studies for a space platform which will come up next year in 1984 are well looked upon by this committee. We think it is a very important program. It is in our space policy statement.

AERONAUTICS

I would like to take a minute or two in the aeronautics area. Although we have spent a great deal of time on this in our prepared statement, I would like to summarize just very briefly in the few minutes remaining our particular viewpoints.

Aeronautics is a major industry. It is a hundred billion dollar industry. It is one that contributes an enormous return to our Government, to our people, and to our whole way of life. It is the second largest employer in the United States. It had the largest trade balance of all of our manufactured products, a very important area in today's tight foreign commercial market. As a result of the continued decreasing emphasis on the research and development that sustains that industry, in the process of going the way of our steel industry, our auto industry, and electronics industry—that is to say, to foreign manufacturers.

The technology that built today's airplanes was developed in the 1940's and 1950's. We gleaned a good deal of technology from the military demands. Today the demands for military and civilian aircraft are different. We can no longer rely on military research and development. NASA is the source of the next generation technology for the next generation of aircraft and we see the sliding of that research budget as a key factor in the deteriorating economic position of the aeronautics industry overseas today. It is good, but we are losing ground and we better be very careful in the future or we are going to lose more ground. We think the aeronautical research effort in NASA should be doubled. The authorization committee has suggested a $64 million increase in that budget. We certainly support that and hope you do.

We have listed in our statement a number of very specific detailed recommendations as to where we think some of that money could be spent. I will not dwell on those today but refer you to the statement.

We are very pleased to note one of our recommendations has been followed. We were pleased that NASA tested the HIMAT aircraft at supersonic speed. We noticed they did that last week. I don't know if that was in response to our urging, but it is certainly a step in the right direction. They did, as we predicted, find some technical differences from their original expectations.

Mr. Chairman, I would like to thank you for the opportunity to present this statement. I would like to just quote for you one or two lines from our new space policy statement, and I think this would set the theme for what we are trying to say. President Reagan had said in his Inaugural Address, "It is time for us to realize that we are too great a nation to limit ourselves to small dreams." And the AIAA, as a consequence of that, has said that, "The AIAA, therefore, urges the administration to make a further commitment to the principles enunciated in the National Aeronautics and Space Act of 1958 and to U.S. preeminence in space activities."

Thank you, Mr. Chairman.

Senator GARN. Thank you, Dr. Grey. As an old pilot of many years, I couldn't agree with you more on the spinoffs in the future in the aeronautical industry. I think we will make a great mistake if we don't invest in that future.

Obviously, we have budgetary problems. I agree with you and would love to double the aeronautics budget. But it is absolutely impossible to even contemplate such a move. And yet I think we would get the money back many times over in the future if we did double the aeronautics budget.

Thank you very much.

Dr. GREY. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF DR. JERRY GREY, ADMINISTRATOR, PUBLIC POLICY, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

The AIAA, as you know, is a professional society whose membership of over 30,000 individual engineers, scientists, managers, and student encompasses all the disciplines associated with aeronautics and space. We appreciate once again the opportunity to appear before this Subcommittee to express our views on the proposed FY 1983 NASA budget.

As we have mentioned in the past, we believe that the NASA programs we are here to discuss today are essential to the future prosperity and security of the United States, and do, indeed, in the long run, serve to benefit all mankind. We are obviously strong proponents of aerospace activities. We also, we hope, are reasonable citizens, capable of taking a balanced view of the nation's fiscal problems.

We have consistently maintained the position that even in a period of fiscal austerity, the NASA budget is the wrong place to demonstrate parsimony, and we are therefore pleased this year to see what we believe to be a generally rational program proposed by the Administration. Given today's economic realities, a budget that keeps pace with inflation would be a reasonable expectation. Nevertheless, given the relatively suppressed level of last year's NASA budget, the level FY 1983 budget (in constant dollars as measured by the Consumer Price Index) must be considered only as a holding action. We realize, of course, that this segment of the federal sector, as others, must be constrained until the nation's economy is again under reasonable control. For this reason, we support the overall level of NASA activity proposed by the Administration as being a reasonable minimum, but strongly caution against further reduction. If the FY 1983 NASA budget is constrained to the FY 1982 level, as has been suggested by the Budget Committee, we believe the damage to the nation's economy in future years could be seriously debilitating. The NASA belt is already very tight.

Our statement today deals first with space, and then with aeronautics.

SPACE

In space we have reached a major turning point in the exploration and use of this new environment.

The initial scientific reconnaissance of the solar and Earth-Moon systems has been extensive. Key applications of space-based systems to the civil sector have been accomplished, and extensive commercialization is now underway. Extended manned habitation in space has been demonstrated, and man's utility as a functional part of space systems has been proven. New transportation systems, most notably the U.S. Space Transportation System and the European Ariane, are now ready for service. These are all watershed points in our evolution into a civilization which integrates Earth and space into a continuous environmental context, an evolution we believe is both proper and inexorable. We now must look to the future.

We have identified for comment three general areas in which NASA has responsibility under the National Aeronautics and Space Act of 1958: space science, space applications, and the development of new capabilities for space operation. The chartered NASA role in these areas is clear, as is the agency's responsibility to maintain a close relationship with the national security sector. These are areas in which enormous strides will be made in the coming decades. Whether the U.S. maintains its mandated position of leadership, as we believe it should, will, as always, depend on the budgetary decisions made by this Congress. The programs and the policies which evolve over the next few months will set the course.

Space Science

In space science, it is gratifying to see several important ventures progressing: Space Telescope (ST); Gamma Ray Observatory (GRO); Spacelab Payloads; Galileo; the single-spacecraft International Solar Polar (ISPM) Mission; two Explorers, the Active Magnetospheric Particle Tracer Explorer (AMPTE) and the Cosmic Background Explorer (COBE); mission definition activities for the Origins of Plasma in the Earth's Neighborhood (OPEN) Mission; and several others. The Life Sciences program, which is essential to our future manned activities, is also to receive adequately support. The significance of these projects has been discussed with you in the past, and will not be repeated here.

However, we would like to reiterate the expected bonanza of scientific information to be obtained by the Space Telescope and other orbiting observatories, as detailed in the October 1981 issue of Astronautics & Aeronautics. The continuation of the planetary program is also a vital element of our overall space science strategy, and is a major factor in international science cooperation. Our recent letter to the Administrator of NASA criticizing the termination of the US ISPM spacecraft was motivated in large part by the serious effect such a move has on the credibility of the United States as a partner for international cooperative ventures. Such cooperation is an appropriate and effective way to control the costs of science programs, which do, indeed, benefit all mankind, as we have pointed out on page 23 of the December 1981 issue of Astronautics & Aeronautics.

Enthusiasm at seeing these programs proceed is tempered by disappointment that program delays are introducing inefficiencies which appear as increased runout costs. This concern is perhaps best illustrated by the fact that the fiercest of the recent budget battles have been waged over previously approved programs of the quality of Galileo and Solar Polar, efforts of considerable scientific and national-prestige value that NASA cannot conduct within these austere budgets as originally planned. The $20 million added by the authorization committee for physics and astronomy in FY 1983 is certainly a step in the right direction; we hope you will support it.

This year, many of NASA's fledgling programs are in a survival-is-success mode. But in one area, planetary exploration, the Administration has recommended a going-out-of-business budget proposal, with a drop of 24.6% over FY 82. Such an action would result in the disbanding of research groups, the closing down of operating spacecraft, and a waste of data for lack of analysis. Fortunately, by its recommended infusion of $40 million into the FY 1983 planetary exploration program, the Committee on Science, Technology, and Space has acted to reverse what we consider to be the unwise decision to turn off Pioneers 10 and 11 and Pioneer Venus next January. Pioneers 10 and 11 are sailing through uncharted space. Their solar wind and cosmic ray detectors are well equipped to identify the heliopause, the boundary of the Sun's influence in the galaxy and a region that has never before been detected. Its nature, structure, and behavior may tell us how and why galactic cosmic intensities we see near Earth are different from those in the galaxy in general. No other spacecraft in this century has even a chance of reaching to these distances, while Pioneer 10 is already 25 astronomical units from the Sun (25 times as far as Earth). Pioneer Venus is sampling new regions of Venus's atmosphere as its periapsis rises. Its cosmic ray detector allows location of gamma ray burst sources in concert with Earth-orbiting spacecraft. The price of keeping these facilities alive and continuing the analysis of their data is truly a small fraction of the investment the American public has already made in them. We hope you will support the House action to reinstate them.

We are concerned that in planetary exploration the funding which supports the stimulation of embryonic ideas has all but disappeared. It is clear that the time has now come to re-evaluate planetary programs to set a new direction for the future. We believe the outcome of current studies in this area could lead to the development of less expensive missions for the late 1980's and the early 1990's as well as planning for more ambitious manned missions in the future.

The AIAA also believes that serious consideration should be given to resuming detailed investigation of our own Moon. Although we have walked (and ridden) on the lunar surface, we obviously understand the Moon far less fully than we understand the Earth. Many square kilometers of the lunar surface are unexplored, and many challenging scientific mysteries remain.

Space Applications

In the area of space applications investments, which provide the nearest-term payback to the economy and to national security, the Administration is seeking to transfer mature capabilities into the private sector. We support this strategy, but are concerned that the resources committeed to the applications program are insufficient to permit an orderly and efficient transition.

The philosophy underlying the entire Resource Observation program is to conduct all applications of remote sensing in conjunction with the user community -- federal agencies; state, regional, and local governments; private industry; and the scientific community. While the current-level program is well established with the LANDSAT data source, it is becoming increasingly important that support be given to development of next-generation Earth sensors and the satellite systems to orbit such sensors. We have urged that future budgets permit at least a modest start in advanced development efforts for resource observation. The proposed assumption of LANDSAT system responsibility by NOAA starting in 1983 is, we believe, a sound initial step.

The keystone of the oceanic observation program is of course the NOSS system that was zeroed out in FY '82. We believe that this planned cooperative program funded by NASA, DOD, and Department of Commerce should be resurrected as soon as possible, with or without DOD support. In addition, we urge that definition and early development of essential instruments for the UARS satellite be expanded relative to FY '82 funding. We are pleased to see that the proposed Administration's FY 1983 budget does in fact contain an increase from $6.0 to $14.0 million for UARS experiments, as well as sustained support for the Earth Radiation Budget experiment. The latter will greatly enhance our understanding of climatic processes.

In view of increasing worldwide concern about quantitative trends in the Earth's ozone layer we are disappointed to find no funding in FY '83 for the Halogen Occultation Experiment, but cannot dispute its priority relative to UARS and Spacelab experiments. Continuing support for the AgRISTARS and Geodynamcis program is also encouraging.

As we noted last year, the potential for commercial application of materials processing techniques seems especially bright, a fact not overlooked by the Germans, Japanese, and Soviets. Although we note that the last year has seen increasing interest from the private sector in this area, commercial materials processing in the long-term view will require a federally supported orbital facility to supply continuing power, thermal control, and other essential services.

It is in the communications applications area, however, that NASA's FY 83 budget is of particular concern to us. Last year, NASA presented a budget that supported their planned reentry into the satellite communications technology leadership role. Unfortunately, the Administration's proposed FY 83 budget of $12M is inadequate even for the continued development of key component technologies, and can only be interpreted as a going-out-of-business budget for communications.

Since 1975, the AIAA has strongly supported the need for NASA to fund technology development and demonstration in the field of satellite communications. Last July we again testified to the House Subcommittee on Space Science and Applications in support of NASA's program and, in particular, we recommended that Congress support their efforts to prepare for a flight test of the 30/20 GHz program. The rationale for this recommendation remains sound. We therefore strongly support the authorization committee's recommendation that $20 million be added to the FY 1983 budget so that the 30/20 GHz demonstration program can proceed. We believe this important program warrants an even greater investment; we hope your subcommittee will see fit to support any such action. The need for NASA leadership is even greater today than it was last year, when we made the same recommendation.

Communications and information systems are key technologies of the post-industrial age we are now entering, and are already an arena of intense international competition. History has shown that for undertandable reasons, the communications industry alone cannot and will not provide adequate support for the advanced work needed now to support space communications systems of the 1990's. This type of activity, which is being aggressively supported by European and Japanese Governments, must be matched by a NASA lead effort if we are to maintain our preeminence in this important world market. We do not believe that military technology (the Milstar program) is sufficiently applicable to civil systems to replace the much-needed 30/20 GHz flight test effort.

I want to reiterate at this point our view that the Administration's goal of moving applications programs to the private sector is sound. The immediate task is to identify and help resolve obstacles to effective and timely transition, while maintaining adequate technical support in the interim. Hasty or poorly planned actions here can have a significant adverse effect on our nation's economic, political, and military strength in the next decade. It therefore seems difficult to understand how an Administration dedicated to private-sector business development can cut back funds for technology transfer and technology utilization. The AIAA's experience in our special programs involving many of the Fortune-500 non-aerospace corporations has clearly demonstrated the usefulness of these relatively small efforts in bringing NASA-developed technology and services to the non-aerospace private sector, a function which is oriented precisely in the direction this Administration has identified to rebuild the nation's sagging economy. The authorization committee has recommended restoring $5 million to the critically important and cost-effective Technology Utilization program. We hope your Subcommittee will agree.

Development of Space Operations Capability

The final area in which specific comment on the proposed space budget is in order concerns NASA's programs to develop new capabilities in support of space exploration. This is a key function of the civil space agency and, indeed, a major reason for NASA's existence. New capabilities make science possible and lead to new applications.

The principal development activity, and the cornerstone of the NASA budget, is the Space Transportation System. We salute the Congress and the Administration for sustained support of this program, which promises to make space transportation operations routine (in a sense approaching that of the civil aviation system) and to lead to new and dramatic capabilities in orbit.

As the STS moves from a developmental to an operational program, several needs are clear. First, all necessary steps must be taken to increase the flight rate and reduce operations costs, while maintaining reliability, safety and flexibility. Moreover, as the shuttle moves into operation, needed improvements must be incorporated. To improve performance, filament-wound solid rocket booster cases should be developed; we are pleased to note that defense needs have initiated this process and that the authorization committee has supported it in the FY 1983 budget. External tank production facilities should be expanded, as requested. Moreover, although not in the administration submittal, purchase of needed long-lead items for Orbiter 105 and perhaps 106 should be initiated. As we testified last year, analysis indicates a traffic demand which cannot be met by a four-orbiter fleet. If defense requirements call for dedicated vehicles, the situation would become even more critical. Not to keep the door open now for additional orbiter procurement would be short-sighted, since a break in production would be highly costly in the long run. We believe such insurance would be a sound economic investment. There appear to be three options for proceeding in this direction: (a) increasing the NASA budget, (b) accepting a private-sector offer to finance a fifth orbiter, (c) as proposed by the authorization committee, redirect $90 million of an increase in DoD launch-cost funds to NASA for this purpose, in recognition of the benefits the Defense Department will obtain from shuttle operational capability.

At the same time, serious consideration must be given to defining the next-generation launch system, and to incorporating needed improvements into future operational vehicles. We believe the time is ripe for beginning to put STS management on a truly operational footing. Regardless of who operates the shuttle, that organization should be dedicated to operations, not development, and should be responsive to the needs of all users. Only when such an operational shuttle fleet is available can this nation consider dispensing completely with expendable vehicles. Until that time, our expendable launch-vehicle capability for civil missions should remain viable, especially in the light of overseas launch-services competition. In this context, to help keep the U.S. competitive in the launch service area, the government should identify and support methods for providing acceptable financing arrangements to all STS customers. As an interim measure, at the very least, NASA should renegotiate its present price schedule to reflect current economic conditions, as has been recommended by the authorization committee.

Unique shuttle capabilities which set the U.S. STS off from other launch systems must be demonstrated as soon as possible. The AIAA believes that the planned in-orbit repair of the Solar Maximum mission is especially significant, partly because it will restore to service a costly and important instrument, but particularly because it would demonstrate a unique and vital shuttle-based operation. We believe the authorization committee's endorsement of the effort should be sustained as strongly as possible.

We must continue our support of Spacelab experiments, not only for their intrinsic value, which is high, but also to help reconfirm our stature as an international partner. In general, the shuttle should be exploited for its unique characteristics, not only to capitalize on our investment, but also to define the real utility of man in orbit and the requirements for future capabilities.

In a budget which proposes over $1.7 billion dollars for production of a new transportation capability, it is disconcerting, to say the least, that the Administration has allocated less than $12 million dollars (0.7%) to planning the next steps. The Advanced Programs element is key to the future of NASA and to the entire civil space program, and should be significantly strengthened. We hope some of the reprogramming of funds which has been recommended by the authorization committee will serve to enhance this important activity.

The foremost need now, and one which should be addressed immediately, is for an advanced upper stage for the shuttle to meet mission requirements beyond the capability of the Inertial Upper Stage (IUS) and the Payload Assist Modules. The need for such a vehicle is supported in the conclusion of the "Upper Stage Alternatives for the Shuttle Era - A NASA/DOD Report to Congress," which states, "An Interorbital Transfer Vehicle (IOTV), since it would be optimally designed to meet national requirements, would be the best upper stage to meet the long-term performance and operational needs of both NASA and the DOD." Unless we begin immediately with the definition and development of an advanced shuttle-optimized high-energy upper stage, our nation's ability to meet future mission requirements will be severely constrained. Many people tend to forget that IUS was always intended to be an interim vehicle to fill the gap between the advent of the shuttle and the advent of the Orbit Transfer Vehicle (OTV). The eventual need for an OTV was never in doubt, as the AIAA stated formally in 1972.

With the shuttle transitioning to operational status, we should proceed aggressively with an appropriate OTV designed to meet our future national needs, as the authorization committee's action to reprogram $150 million indicates.

Similarly, as shuttle development is completed, NASA must initiate needed complementary capabilities. Our experience with space operations clearly indicates that an orbital terminal will be needed for shuttle operations. The uses of such a capability have been studied fully (see the April 1981 issue of Astronautics & Aeronautics), and the time is ripe for starting the long-term evolution of such a facility. We have already mentioned the need for a service platform to support commercial materials processing activities. In the longer run, such a facility could exploit more fully the unique characteristics of man as a useful part of the operating system.

The AIAA has recently published a comprehensive assessment of our understanding of man's ability to do useful work in space (Working in Space, 1981). As a result, we recognize that future orbital activity must use the flexibility, capability, and ingenuity uniquely offered by the human operator. The orbital base is an essential element in extended manned space operation. It appears, incidentally, that the Soviet Union has not misread this lesson.

What we are suggesting is not another Apollo-like program with steep budget spikes, but rather a sustained, long-term commitment to the orderly evolution of an orbital facility which can serve a multitude of essential functions, eventually including manned habitation. In addition to its more utilitarian potentials, the continuation of manned space travel offers opportunities for unprecedented expansion of our collective consciousness, and, in the words of Louis J. Halle, provides, at last, "a hopeful future for mankind" (Foreign Affairs, Summer 1980).

Space Research and Technology

Finally, NASA's Space Research and Technology Program provides the groundwork for future capabilities. It is the heart of NASA's future space effort. The establishment and maintenance of an appropriate technology base is key to our nation's well-being; this tenet is particularly appropriate to the U.S. space program. In addition to the technologies we have already mentioned, key areas which must be supported include liquid rocket propulsion, robotics and artificial intelligence, cryogenic handling, large structures, power generation, energy storage, and heat rejection systems. Much of this technology base will support developments needed to ensure national security; the AIAA is intimately familiar with these applications as a result of our annual review of Air Force space technology programs. We will not go into the needs within each of these areas, but we are prepared to provide you with details if requested. We are now in the process of preparing an Institute position on liquid rocket propulsion, and we therefore hope that some of the $10 million the authorization committee recommended to restore to space research and technology will be applied to this critical technology area.

Space Policy

Mr. Chairman, this concludes our prepared remarks on the proposed NASA space budget, but at this point we would like to recognize the on-going process within the government to develop a national space policy. The AIAA, naturally, has taken a strong interest in this process, and has itself prepared a proposed space policy (copy attached herewith), highlighting our view of the framework into which future space activities should fall.

AERONAUTICS

Turning now to the subject of Aeronautics, we will present our views here today from the perspective of the AIAA Aircraft Design Committee, whose members hold leading positions in advanced design, development and requirements for military and civil aircraft. Our consensus of judgments is based on our independent review of the NASA FY 83 budget in terms of the impact that these efforts will have on future U.S. aircraft designs. Any given point of view does not necessarily represent the individual opinion of each and every organization represented by our membership or of every single member of the committee. I believe that you will probably receive a complete spectrum of opinions to consider from other sources. However, we were able to reach substantial agreement on the issues involved in this budget because of our common interest in advancing this nation's aeronautical capabilities.

There has been much testimony to Congress supporting the fact that progress in aeronautics is vital to our nation's economy, security and welfare. The aircraft and airline industry is a $100 billion business, second only to auto manufacturing in employment. Over the past decade, aviation products made the greatest single positive contribution of any manufacturing industry to the net balance of trade; in 1980 it was about four times greater than all the R&D funds expended by the Federal Government that year for both military and civil aeronautics. The average annual compound growth of civil aircraft sales was 21% from 1975 to 1980. This was the third largest growth rate among fifty major U.S. industries; only computer and brokerage firm sales grew at a greater rate. The United States produced about 80 percent of all the free world's aircraft now in service. The market prospects for aviation products over the next 10 years are almost without parallel in peacetime aviation history. Yet, these facts do not nearly reflect the profound impact that progress in aeronautics has on our nation.

The extent of economic activity in commerce directly due to the availability of efficient and economical air transportation is beyond measure. We can only imagine the tremendous dollar volume of business transacted and conducted through air travel. Progress in aviation has brought forth a vast geographic expansion of markets for large and small American companies, extending them to the full extent of our nation's boundaries and far beyond into world markets. American companies are effectively employing world labor pools and operating major international subsidiaries in the conduct of worldwide commerce activities. U.S. airlines carried roughly 130 million business passengers on domestic routes, 11 million business passengers on international routes, and 14 million tons of high-value freight in 1980.

This volume of activity, furthermore, has been carried out at ever-decreasing unit cost. Progress in aircraft designs has yielded almost continuous decreases in the average price of air travel, reducing it from $17 to $10 per hundred miles between 1960 and 1978 (in constant 1980 dollars). These major airline price declines occurred before the advent of deregulation. Meanwhile, the costs of rail and bus travel have escalated with inflation, making them no more than 20 to 30% lower than air travel. American aviation has grown to include over 200,000 civil aircraft, 15,000 airports, 800,000 pilots and 400,000 aviation ground support personnel. Large corporations and even moderate-sized businesses are not only using commercial airlines, but are also operating their own aircraft for executive and basic transportation. Industries are dispersing plants to regions in the nation that provide more efficent operations, lower labor rates and often a higher quality of life. Aircraft and helicopters are used in oil operations, agriculture, logging, forest-fire control, banking, police patrol, border and coastal patrol, and emergency evacuation. The impact of aeronautics on our nation's economy clearly extends far beyond the mere value of aircraft and airline sales. Governmental support for aeronautics is important, in an economic sense, because of the additional momentum that progress in aeronautics provides to our nation's overall economy and world economic development.

The U.S. Government itself must have aircraft for national defense. Over one-third of the total value of aircraft, engines, and parts manufactured in the United States are sold to the military services. These purchases must increase substantially over the next 10 years, for bombers, transports, airborne control and warning aircraft, trainers, helicopters, light utility aircraft, remotely piloted vehicles, cruise missiles, and other air-launched missiles. Military aircraft and air-breathing missiles provide high flexibility to rapidly project military power.

Our nation's progress in aeronautics and the growth of this great industry has not been a matter of natural economic evolution or the pure force of private enterprise. From the very beginning, the Federal Government has been a major force behind the advancement of our aircraft industry. Military funding for R&D has always played a primary role in aeronautical progress. The National Advisory Committee for Aeronautics (1915-1958) and later the National Aeronautics and Space Administration (1958-present) have from the earliest days provided a common pool of systematic long-term research, technical advice and assistance on development programs, and first-rate aeronautical facilities for use by all aeronautical R&D sectors. The relationships between government agencies, industry, universities, and research institutes in this country have provided a unique and highly successful combination that must be strengthened in the years to come. Other nations recognize what we have done and are providing governmental support for aeronautics, including research support and direct financial assistance to their aviation industries. These countries are now making substantial progress relative to the United States in many areas and are reaping some of the same rewards that we have enjoyed.

The fact is that we have, to a large extent, been living off investments made in the past. We are not plowing back enough money into aeronautical R&D for the future. The total national investment in aeronautical R&D has dropped steadily from about 17% of sales in 1968 to 11% of sales in 1980. The actual total national investment in aeronautical R&D declined about 30% in real terms, considering inflation. The Government remained the prime source of R&D funds. However, our military service have become less aggressive in pursuing major advances in aeronautical research, technology, and prototype aircraft than in earlier years. The aeronautics industry maintained its own R&D investments at roughly between 2 to 4% of sales within this period. This level of industry investment is consistent with the average R&D investments of most other high-technology industries, although some invest up to 10% of sales in products which bring higher profits. The aerospace industry, which consists largely of the same firms engaged in aeronautics in aeronautics, had after-tax profits only between 2% and 5% of sales during this period. The average profits of aerospace firms were generally 1 or 2 percentage points below the average profits for all manufacturing companies over the last decade (based on assets, equity, or sales). Hence, the aeronautics industry is not in a financial position to take major risks or make substantially greater investments in aeronautical R&D.

Yet, progress in aeronautics requires the highest investment in R&D of any industry because it is our highest technology industry. The level of technology for aeronautics is evident from the total figures on the required R&D investment as a percent of sales. Furthermore, except for space and missiles, the aeronautics industry requires roughly twice as many engineers and scientists per 1000 employees as any of the other 15 major U.S. industries. A single new aircraft design incorporates the latest developments in such high-technology areas as computers, electronics, structures and materials, propulsion, fuels, aerodynamics, and controls---all brought together into a single, minimum-weight, durable machine. The resultant aircraft must withstand the daily use of an airliner or the rugged environment of a military aircraft in war. Without Government effort to continually upgrade research and technology, we will be left with a private industry that will focus only on limited near-term research and low-risk concepts that can provide it a near term competitive edge. Aircraft manufacturers cannot afford to do otherwise with their limited individual economic returns. Government support is justified by the extraordinary expenditures required for this, our highest technology industry, and by the extensive benefits that advances in aeronautics provide to our overall national economy, security, and welfare.

The NASA budget represents an important portion of our governmental support for aeronautical R&D. The technical data, theories, and new concepts available from NASA provide our competitive free-enterprise system a valuable common pool of practical research and technology to develop alternative solutions for military, commercial, and general aviation aircraft. The NASA aeronautical facilities provide a common capacity for experimentation, computation and testing. This agency's technical capabilities, facilites, and technical results simply could not be duplicated in industry, and it would be extremely inefficient for each company to attempt to duplicate them individually. Hence, NASA programs are important to aeronautics when they are correctly oriented and properly funded.

Turning now the NASA aeronautics budget, we support its general thrust and even many of the program changes that have been made. However, the fundamental problem with NASA's aeronautics budget is its magnitude. The total proposed for aeronautics is $494 million in FY 1983. Support for aeronautics is only 7.5% of the total NASA proposal. The NASA budget for aeronautics has declined over 30% in real terms over the last two years. The total amount allocated to aeronautics should probably be about twice as large, which would add about 1.5% to the nation's investment in aeronautical R&D relative to product sales. The proposed NASA funds for internal aeronautical laboratory research operations and program management ($243 M) and facilities construction ($19 M) are respectively 21% and 19% of the NASA budget for the same categories. However, the administration's proposed aeronautical contract R&D budget ($232 M) is the most debated part of the aeronautics budget, even though it is only 4% of NASA's total R&D contract budget. This portion of the NASA aeronautics budget, in real terms, was 60% higher in 1980 than it is today. At the very least, we recommend support of the Science, Technology, and Space Committee's recommendation for an increase of $64 million in the NASA FY 83 aeronautics budget.

The general thrusts proposed for experimental, analytical, and computational research in aerodynamics, propulsion, structures and materials, and flight controls are extremely important to maintaining this nation's strength in aeronautics. NASA's aeronautical facilities for wind tunnel testing, numerical computations, and flight simulation should be expanded, improved, maintained, and operated based on the high demand for them. These facilities must provide not only high-quality tools for NASA research, but also a major portion of the aeronautical facilities capacity to be shared by all aeronautical R&D organizations in the United States. In certain select cases, NASA should play an important role in advancing aeronautical technology, systems technology, and hardware systems technology demonstration. However, there must be a particularly good fit between NASA's technology programs and the technology programs naturally undertaken by industry, the military services, and other governmental agencies. The potential results of NASA's technology programs must warrant their costs, which tend to be markedly higher than for basic and applied research. The funding and manpower for NASA's technology programs must not displace or submerge NASA's high-priority, creative, long-term research programs. The proposed NASA aeronautical program for FY 83 largely fits these criteria and thus, in principle, we strongly support this program.

There are, however, specific program areas and cases in which we disagree with the budget. Reemphasizing our statement that the views expressed here reflect only those of the AIAA Technical Committee on Aircraft Design, we will discuss these items in order of importance under each major budget category and assign each recommended change a number representing our judgment of its relative priority to NASA's total aeronautical activities. The numerical priorities may be considered on this scale: 0 - should be dropped, 1 - is questionable, 2 - is valuable, 3 - is extremely valuable and 4 - is of highest importance. All the NASA programs that we support in the budget have a priority of 2 or higher. Hence, our recommendation for a program with a priority of 2 or more is a good rating on our rather conservative priority scale. The changes recommended for any program should result from equivalent increments in the total NASA aeronautics budget.

High-Speed Aircraft Systems Technology Programs - In our opinion, the budget for the High-Speed Aircraft System Technology Program should be increased by at least $3 million, giving a total program budget of $23 million (Priority 3.4). The House authorization committee has chosen to delete $13 million from High-Speed and Low-Speed Aircraft Systems Technology, on the basis that it should be supported by the Defense department, which is its prime beneficiary. We are, of course, hopeful that the DOD would see fit to do so, but it is important to the future of U.S. aviation capability that these programs be carried out somewhere in the federal system. NASA should, in any case, stress joint systems technology programs with the Air Force and DARPA on the Forward Swept Wing X-29, the Variable Camber F-111, and the Advanced Fighter Technology Integration AFTI-16.

HIMAT testing should not be terminated this year as planned. Large investments in time and funds have been made in the HIMAT vehicle, supporting ground systems, and associated research and technology efforts. As of this date, only about 16 flight tests have been completed and these tests have all been subsonic. NASA seems reluctant to test this pilotless vehicle in the high-risk regime for which it was intended, namely under difficult control manuevers and at supersonic Mach numbers. NASA should test this vehicle under these high-risk flight conditions, regardless of the potential for vehicle destruction. The experimental flight results which would be obtained by testing under these conditions in terms of aerodynamics, structures, propulsion integration, and flight control characteristics can provide useful data for comparisons with theoretical predictions and ground test results. These comparisons will improve our ability to predict such characteristics and design future fighter aircraft for these flight conditions.

With regard to Supersonic Cruise Technology, we believe that supersonic vehicle research and technology can have valuable benefits to potential users in the military and perhaps eventually in the transport industry. However, NASA should not be conducting systems applications and mission analysis studies for military applications. This type of work is more appropriately planned, conducted, and funded by the military services, who have the responsibility, mission experience, and expertise for it, as was noted by the House.

Advanced Propulsion System Technology - We had recommended to the authorization committee that at least $10 million should be added to the NASA budget in this area. The propfan is the most important area of work that should be funded under this program (Priority 3). It offers the prospect of high fuel efficiency, long range, and endurance for future military aircraft as well as for civil aircraft. The propfan could greatly influence the design of many types of aircraft in the 1990s. However, this technology is too risky now and its development is too far-term for industry or the military to pursue it without the prospects of lower technological risks and fairly well defined future applications. The energy-efficient engine program is also expected to provide useful results for more efficient civil and military jet engines in the future (Priority 2.4).

Propulsion System Technology - We had recommended a budget increase of at least $2 million for the Propulsion Systems Technology Program, rather than deleting it as proposed in the NASA budget (Priority 2.7). NASA should continue to pursue transmission technology efforts applicable to all rotating propulsion systems, without reduction in the current level of effort. The development of advanced concepts and analytical techniques for transmission systems will benefit both military and civil aircraft efficiency, reliability, and maintenance costs.

Transport Aircraft Systems Technology - We had recommended that the NASA budget be increased by about $12 million for transport systems technology (Priority 2.5). This work is generally applicable to civil and military transports, as well as other large military aircraft. The most important area of work that should be funded under this program is composite aircraft structures (Priority 2.5). The art and technology of designing and constructing large composite aircraft structures has not been achieved. Composite structures offer the potential to achieve lighter, more efficient aircraft or longer range and higher endurance military and civil aircraft. Composite structures technology can also affect such military characteristics as the aircraft radar signature and aircraft size, both of which influence aircraft stealth. The Terminal Configured Vehicle Program (Priority 2) and energy efficient transport activity (Priority 1.9) are also expected to yield useful results for both military and civil applications. The laminar flow control program is of lower relative priority, in our opinion (priority 1.3).

Other Systems Technology Programs - We fully support the remaining FY 83 allocations and actions proposed in the NASA budget for the other Systems Technology programs. The Low-Speed Aircraft Systems Technology Program should be funded as planned; that support could come either from NASA or from DOD, as the House has recommended. NASA work on avionics systems technology slated to be transferred into the technology base seems of lower priority than NASA's other programs. Substantial work is underway and will probably be funded by the military and commercial sectors at funding levels exceeding that of the NASA effort in this area.

In aeronautical research and technology, the Administration has proposed a $182 million research and technology base budget. Our specific recommendations in this area are as follows:

Aerodynamic Research & Technology - The planned budget for the Aerodynamic Research & Technology Program should be increased by at least $2 million, giving a total of approximately $44 million (Priority 3.6). We recommend this modest, but important, increase to support expansion of systematic applied aerodynamic research on aircraft components and integrated configurations. Such research provides aerodynamic design alternatives for improved configurations, rapid prediction methods, and a systematic related data base for aircraft design applications. The expanded NASA program should emphasize experimental research and comparisons of data with analytical theoretical approximations, semi-empirical theories, and computational methods that can be used readily in the aircraft design process over the next two decades. NASA's work in aerodynamics should cover subsonic, transonic, and supersonic Mach numbers. We also support NASA's planned applied aerodynamic research efforts under the Low-Speed and High Speed Research and Technology Program line items in the budget.

High-Speed Research and Technology - The budget for High Speed Research and Technology should be increased by at least $4 million, for a total of $31 million (Priority 3.2). We recommend this budget increase to support operation of NASA's extensive wind tunnel facilities for aerodynamic, structural, and propulsion research. NASA is strapped for funds for wind tunnel operations at a time of record schedule backlogs, which are now booked 2 to 3 years into the future. For example, we understand that NASA Ames is planning to close down its 14-foot wind tunnel, in spite of years of backlog work, simply because there are not enough wind-tunnel operating funds. The internal NASA laboratory research suffers most in this environment; time-urgent test programs for the military and civil users tend to receive priority in NASA wind tunnels. The proposed budget increase will go a long way toward enabling NASA to use its wind-tunnel capacity to meet the high demand placed on it.

We generally support all of the planned work under the High-Speed Research and Technology Program. However, the work on engine nozzles should be systematically broadened to cover a wider spectrum of engine nozzles, rather than just two-dimensional nozzles. There are many potential cases in which axisymmetric nozzles are more appropriate for future applications.

Transport Research and Technolgy - Transport Research and Technology should be funded for about $6 million under the other budget items to which NASA has assigned it (Priority 2.5). NASA's work on transport research and technology should be continued because of its possible long-term value to military transport aircraft, airborne warning and control aircraft, long-range sea control aircraft, and other military applications as well as to civil transports. The total NASA budget should be appropriately adjusted to provide this funding if it has not been fully included, without decreasing the other planned aeronautical R&T activities under those budget items.

General Aviation and Computer Research and Technology - We strongly support continuing NASA general aviation research and technology efforts at a level of at least $8 million under the new budget categories to which it has been assigned (Priority 2.5). Of highest priority is the propulsion work on fuel-efficient engines, low-speed propellers, alternate and multi-fuel engines, and improvements in propulsion/airframe integration. The areas of work conducted under general aviation R&T are important not only to civil general aviation and commuter aircraft, but also to future light military aircraft.

General aviation to this day draws heavily on the wealth of knowledge developed by the National Advisory Committee for Aeronautics (NACA) prior to 1958. Over the last five years or so, NASA has again been moving forward in this area by replenishing the common base of research and technology by improving prediction methods, expanding the experimental data base, and providing new concepts in such critical areas as propulsion and wing design. General aviation companies cannot and would not provide a common base of knowledge of this kind. We believe that NASA must increase rather than slacken its research for this segment of the aviation industry. We are living in a time when other nations such as Canada, France, Germany, Brazil, Japan, and Spain are wisely providing heavy government research and financial support for their general aviation industries, and they are making relatively great progress in this area.

Other Research and Technology Programs - We strongly support NASA's planned programs and the relative budget levels on NASA's other research and technolgy base efforts; i.e., propulsion, materials, structures, and programs in the low-speed, high-speed and multidisciplinary areas. The NASA human factors contract R&D program seems to us of lower priority than NASA's other aeronautical programs, in view of the responsibilities and substantial efforts in human factors being conducted by the military, industry, and the FAA. However, such work might be justifiable under a substantially larger NASA budget.

We support all aspects of NASA's aircraft control and guidance research and technology, except the work on shuttle handling qualities. While the shuttle work seems worthwhile, the funding for it should come out of the space budget. The research and technology R&T line item should not be decreased in the aeronautics budget with the transfer of the shuttle work to the space budget.

Wind tunnel facilities - the budget should be increased by at least $2 million this year and more in later years for increased maintenance and repair of NASA's wind tunnels (Priority 3.2). These wind tunnels represent the largest investment of their kind in the free world. Most of the facilities are 20 to 40 years old. A continual investment must be made selectively to upgrade and improve these facilities across the board to keep them effective and efficient, consistent with demand. We hope some of the $10 million reprogrammed by the authorization committee for new facilities will be used for this purpose.

We strongly endorse the other items in the NASA aeronautical facilities budget proposal.

In closing we express two general concerns about planned alterations in NASA system technology programs. First, we are concerned that the cancellation of high-visibility systems technology programs and subsequent reassignment of portions of this work to the research and technology base may actually lead to undesirable decreases in high-priority R&T base work, even though the budget is increased in this area. Second, we believe that the emphasis on joint NASA/DoD systems programs can be highly beneficial, if they are properly structured. However, it is important that NASA laboratories do not become mere extensions of the military laboratory system or "independent military laboratories of another kind." NASA must increase its innovative, systematic, long-term research to provide a superior practical base of knowledge for designign both military and civil aircraft. NASA's major research thrusts should be reasonably stable and not subject to frequent major alterations due to fluctuations in military priorities.

* * * * *

Mr. Chairman, we thank you for this opportunity to present our views, and will be pleased to answer the Subcommittee's questions to the best of our ability.

BIOGRAPHY BRIEF FOR DR. JERRY GREY

Dr. Jerry Grey received his Bachelor's degree in Mechanical Engineering and his Master's in Engineering Physics from Cornell University; his PhD in Aeronautics and Mathematics from the California Institute of Technology.

His early career included stints as a full-time Instructor of Thermodynamics at Cornell, an engine development engineer at Fairchild, a Senior Engineer at Marquardt, and a hypersonic aerodynamicist at the

GALCIT 5-inch Hypersonic Wind Tunnel. He was a professor in Princeton University's Department of Aerospace and Mechanical Sciences for 15 years, where he taught courses in fluid mechanics, propulsion, and nuclear powerplants and served as Director of the Nuclear Propulsion Research Laboratory. He formed the Greyrad Corporation in 1959 and was its full-time President from 1967 to 1971. He is now senior consultant on Public Policy for the American Institute of Aeronautics and Astronautics and Deputy Secretary General of the United Nations Second Conference on the Exploration and Peaceful Uses of Outer Space. He is also Adjunct Professor of Environmental Science at Long Island University, where he teaches courses on energy, Chairman of the Calprobe Corporation, a supplier of high-temperature instrumentation based on Dr. Grey's patents, and a Director of the Applied Solar Energy Corporation.

Dr. Grey is the author of seven books and over two hundred technical papers in the fields of solar energy, fluid dynamics, heat transfer, rocket and aircraft propulsion and power, plasma diagnostics, instrumentation, and the applications of technology. He has served as consultant to the U.S. Congress (as Chairman of the Office of Technology Assessment's Solar Advisory Panel), the United Nations, NASA, the Department of Energy, and the U.S. Air Force, as well as over twenty industrial organizations and laboratories. He was Vice President Publications of the AIAA for five years and Chairman of the Coordinating Committee on Energy of the American Association of Engineering Societies. He is currently Vice President of the International Astronautical Federation, a Director of the American Astronautical Society, a Director of the Scientists Institute for Public Information, and a member of the Explorer's Club. Dr. Grey is listed in Who's Who in America, American Men of Science, Who's Who in Aviation, Engineers of Distinction, Contemporary Authors, and the United Kingdom's Blue Book and Dictionary of International Biography, and is member of the International Academy of Astronautics. His most recent book, Enterprise, was published by William Morrow and Company in 1979; his next book, Beachheads in Space, will be released by MacMillan in 1982.

SPACE POLICY—AN AIAA VIEW

PROLOGUE

The modern world is influenced in every sense by technology. Space activities require some of the most advanced technical innovations and offer some of the most significant benefits. They have brought us much of our present microelectronics capability, as well as more accurate forecasting of weather and natural disasters, low-cost global communication and navigation, and the surveillance from space which is so essential to our national security. Space opens unbounded opportunities for expanding mankind's understanding and utilization of the resources of the universe, and for improving the quality of human life.

The United States' Apollo program, one of mankind's greatest technological achievements, was a true source of pride to our citizens and prestige to our nation. Because it was a civil program, open to the world through television via satellite, its impact was even greater outside this country. Its benefits were extraordinary; indeed, they ranged far beyond most expectations.

Today, more than a decade later, the benefits of the space shuttle are becoming evident. Our challenge, therefore, is to frame space policies and goals that will continue a rational and orderly program of space activities.

THEME

President Reagan said in his inaugural address, "It is time for us to realize that we are too great a nation to limit ourselves to small dreams." He thereby enunciated the theme that our nation is embarked on "a new beginning" to revitalize its economy, strengthen its defense, improve its institutions, reassert technological leadership, and regain national self-esteem.

We believe that the continued exploration, utilization, and development of space is a necessary and integral part of that "new beginning." The AIAA therefore urges the Administration to make a firm recommitment to the principles enunciated in the National Aeronautics and Space Act of 1958, and to U.S. preeminence in space activities. These principles form the cornerstone of the policies and goals we propose herewith.

POLICIES

It is the national space policy of the United States to:

- Maintain vital space operations in support of national security under all conditions.
- Assure that space systems are used in the national interest, through maximizing the return on our past investments and developing promising new applications to keep the U.S. competitive with increasingly competent commercial space capabilities overseas.
- Assure concerted and sustained space-program cooperation among the government, industry, and university communities, each fulfilling the role to which it is best suited.
- Have the Federal government

(a) Continue to provide the primary support for space research, exploration, and the development of new and long-range technology, not only in its own laboratories but also in those of the universities and the industry.

(b) Encourage, by cooperation and appropriate incentives, entrepreneurial investment by the private sector in high-risk, high-payoff applied research and development and the applications of space systems and technology to the commercial marketplace.

- Support and encourage international cooperation consistent with the above-stated economic and national security requirements, particularly in space science and exploration.
- Protect the right to travel and operate in space so that the benefits of space accrue to all mankind equitably and economically.

GOALS

The goals of the national space program are to:

- Maintain coordinated and mutually supporting but separately administered civil and military space programs encompassing both long-term and short-term elements.
- Establish a unified military space doctrine having a coherent architecture for maximum effectiveness in defense operations of the U.S. and its allies during periods of peace, crisis, or warfare, and assure enduring access to space systems by all military services and commands.
- Sustain a federal program to achieve the practical utilization of Earth orbit through cooperative efforts with the private sector, including appropriate incentives and a careful balance of entrepreneurial risks and rewards.
- Achieve routine access to space through continued commitment to an operational space transportation system sized to meet both current and projected needs for defense, commercial, science, and foreign users.
- Reduce the cost and improve the efficiency of all space operations, particularly transportation, through the maintenance of an active and sustained program for development of advanced technology and giving attention to emerging problems such as geostationary orbit crowding and the proliferation of space debris.
- Extend man's knowledge by systematic exploration of the Earth and its biosphere, the Moon, and the solar system using unmanned spacecraft and by studying the universe beyond through the use of both unmanned and man-tended Earth-orbiting astronomical observatories.
- Extend man's capability to live and work in space by developing the orbital facilities and support systems necessary for uninterrupted operations in Earth orbit.

ACTIONS

Initial actions to begin the process of accomplishing these goals are:

- Make a firm commitment to a specific national space program plan for the next two decades, identifying schedule milestones for (1) operation and expansion of the space transportation system, (2) national security and civil operations in Earth orbit, (3) science and exploration, and (4) development of the enabling space technologies.
- Establish programs to develop and implement systems not only to improve surveillance, navigation, and military communications functions, but also to support and assure survivability of U.S. space capability and military ground capability against hostile action.
- Initiate vigorous programs in the enabling technologies which are essential to all space activities, particularly in propulsion, large space structures, power generation, life-support systems, and robotics, to support extended-duration space operations.
- Expand and intensify present efforts to establish specific private-sector incentives for public-service and advanced-technology satellite communication services, Earth observation systems, research in space materials processing, and operation of prototype and demonstration commercial space manufacturing facilities.
- Initiate procedures to determine the optimum operational mode for the space transportation system once it has been fully developed and demonstrated. Such a mode could involve a dedicated federal, semi-federal, or private organization or a restatement of NASA's charter to include such operation. Whatever approach is selected should not erode the important research, technology, and development efforts which are fundamental to all space achievements in the future.
- Continue and expand the evolutionary development of a versatile operational space transportation system adequate to support projected traffic demand, incorporating elements to improve the efficiency and reduce the cost of carrying freight and personnel not only from the Earth into orbit but also between various Earth orbits and other trajectories.

- Establish a specific plan for the next two decades to include (1) a stable program for planetary exploration, (2) investigation of comets and asteroids, (3) reestablishment of lunar exploration activities, (4) continued development of space-based platforms for scientific observation of the Earth, the Sun, the stars, and the Universe, and (5) integration of scientific studies wherever possible in spacecraft or space platforms launched primarily for other purposes.
- Establish a resolute evolutionary program commitment for a manned space facility in low Earth orbit to serve as (1) an operational base for shuttle orbiters and orbital transfer vehicles, (2) an orbital storage, power, and servicing depot, (3) a research laboratory, (4) a construction center, (5) an assembly station for higher Earth orbit missions and outbound deep space flights, (6) a support facility for low-orbit free-flying satellites, and (7) a staging area for the construction and servicing of both commercial and public-service multipurpose geostationary platforms.

By making a firm commitment to a comprehensive space policy and by taking consistent action to implement its goals, the U.S can maintain a leading role in many of the space activities in which it has pioneered. Nearly five hundred years after Columbus opened a path to the New World, we can ensure that U.S. leadership in the exploration and utilization of space will bring maximum returns from the "new world" of space to the nation's citizens and to all the peoples of the world.

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STATEMENT OF SUSAN KOKINDA, WASHINGTON REPRESENTATIVE, NATIONAL DEMOCRATIC POLICY COMMITTEE

Senator GARN. Next I would like to call on Susan Kokinda, Washington representative of the National Democratic Policy Committee.

I hope I pronounced your name correctly.

Ms. KOKINDA. You did.

Thank you, Mr. Chairman. Rather than addressing specifics of the NASA program, I would like to address some of the more broad policy issues, partly because the National Democratic Policy Committee is not on the receiving end of any of these programs. We are a multicandidate political action committee, one of whose major points is the necessity for an aggressive space program.

Our Advisory Council chairman, Lyndon LaRouche, has been speaking recently on the need for this country to adopt great enterprises once again. One of those great enterprises is the necessity for the conquest of space. I think there are compelling moral, economic, and national security reasons for adopting that kind of approach. It was that kind of mobilization toward a great enterprise in the early sixties arising around the Apollo program which gave a sense of direction to a whole generation of young people and in a very large sense is responsible for the scientific and engineering cadre we have today—a cadre we are currently losing in terms of the ability to replenish that from the next generation.

When the Washington Post, which has hardly been a bastion for high-technology orientation over the years, suddenly discovers we are becoming a nation of science and math illiterates, as they did on a recent Sunday, we know the situation is clearly getting acute. I think if we look at what drugs, rock music, and Pac-Man are doing to the current generation of young people, it is only if we regenerate that sense of mission around a great enterprise such as the conquest of space that I think we are going to be able to turn around the maliase sweeping the country.

Economically, I think the points have been touched upon adequately by some of the previous speakers in terms of the economic spinoffs of that space program. I would like to add one further elaboration of that. Our economic model, which looks at the development of real productivity—not GNP, but real productivity in the economy—has been a very careful study of what has caused economic growth and productivity over the last 20 years. It has very little to do with a balanced budget or what the size of the defict may or may not be. It has to do with the role the Government is playing in the areas of advanced technology and infrastructure. In particular, you see the productivity spurts in the sixties almost entirely because of the investment in NASA and investment in infrastructure—water projects, nuclear energy generation. I would suggest we could have an eminently unbalanced budget if that budget was involved in new infusion research in water projects, and so on and so forth. Those would be giving a return on that economic development.

So the arguments of budgetary constraints at this point, I think, fall on somewhat false ground. It is not how much you spend, it is what you are spending it on. I think that is something this administration and Congress is going to have to come to terms with.

I would like to quote from a report recently released by two scientists at Los Alamos. Although not an official Government statement, it makes an important point:

> Space offers the opportunity to extend Earth's natural resources and to exploit them more efficiently. The classic economic problem of scarcity is thus amendable to attack through productivity increases resulting from space development.

That is a very important and direct attack on the neo-Malthusian, zero-growth notions which grip much of the policymaking in this country.

I suggested last year in testimony before this subcommittee that much of the budget-cutting mania emanating from David Stockman's policy was not the desire to balance the budget, but a firm commitment to a zero-growth, post-industrial society. Such a perspective is a self-fulfilling prophecy which we will lock ourselves into if we fail to engage in expansive efforts, and I think the development of space is one of them.

That brings me to a final point. Several days ago when the Senate passed the defense authorization there was an amendment which passed unanimously for a space-based laser program, something we have been advocating for a long time and are gratified to see. But I think there could be a danger inherent from the following: There are some committed neo-Malthusians—and I cite former Defense Secretary James Schlesinger as one of them—who have stated recently, because the Soviets are moving forward with space-based weapons systems, that is the reason the United States will be "forced into a technological breakout mode," and those are Schlesinger's words. There are those who, I think, at this point are recognizing the necessity to continue to support the space program primarily for the military reasons. Those are absolutely valid reasons. We need that approach in terms of strategic capabilities.

However, I think it would be a grave error for anybody to think we can squirrel away one little corner of the military budget in terms of space-based defense systems and be able to develop the kind of capability we need. What we need is very broad based civilian efforts, not only in space, but in frontiers of high-energy research which are subsumed by the military research.

In conclusion, what I would like to do is quote from Congressman John Rhodes, who recently made a profound policy statement on the floor of the House. Much of the press attention was directed to his call toward an eventual pullout of the troops from Western Europe, which is not something I necessarily advocate, but the bulk of his speech was something much more important and interesting. He laid out the fact our defense capability had to be based on our historic commitment to research and development, and what that translates into is space-based defense capacity in antiballistics, and space-based, high-particle energy beams or lasers.

He also goes beyond that and says that is located in the renewed commitment of a notion of frontier, not only for this country but the rest of the world. Since so little press attention was given to this, I would like to close in closing from Congressman Rhodes.

He says:

> For the next several years, we will have to continue to rely on deterrence of aggression. But after that period of time, we should have the most sophisticated defensive systems in the world in Earth orbit, and we should by then have been able to recruit most of the world in a mutual undertaking to provide cheap energy so that all the peoples of the globe can share in its wealth and influence. * * * I would proceed to build a consortium of interested nations to construct satellites in space to produce cheap electric energy for all, and proceed full speed to develop electric energy from fusion of the hydrogen atom. * * * Energy, plus technology, plus a good labor supply, plus good management can make an industrialized nation out of an underdeveloped one in just a few years. * * *
>
> This is the new frontier. In years past when people got bored, there was always new land to be utilized and put to the plow. This is the new land and American science and technology are the plows which we must use to create a peaceful, better world for all of humanity. The time to put our hands to that plow and begin the task is now.

That is the end of Congressman Rhodes' statement. I would just like to say I think the budgetary considerations currently gripping Washington, if you step back and take this larger view, become very small indeed. We would urge a very aggressive expansion of our space program.

Thank you.

Senator GARN. Thank you. We appreciate your testimony this morning.

[The statement follows:]

Statement of Susan Kokinda, National Democratic Policy Committee

The National Democratic Policy Committee would like to commend NASA Administrator James Beggs and the House of Representatives for, thus far, holding FY83 funding for NASA up to the level of $6.6 billion and we hope that the Senate will shortly follow suit. However, that is a small victory indeed, when it is estimated that it would take at least $15 billion in current dollars to bring NASA back to the level of activity it enjoyed in the late 1960's. It is our understanding that Administrator Beggs felt that a $7.6 billion authorization this year was necessary to begin to put NASA back on track to that kind of capability.

There are compelling reasons of both an economic and national security nature which dictate that such a renewed effort be undertaken by this country. But beyond that there is a more deeply-needed imperative for sustaining and expanding NASA. NDPC Advisory Council Chairman, Lyndon H. LaRouche, Jr., recently called for the launching of "great enterprises" to "shift man's point of view" and to overcome the normal "little man" syndrome of the average citizen so that our nation and the human race may survive the coming years. Those "great enterprises," he said, should encompass "bringing the developing sector to parity living standards over the next fifty years" and the "conquest of space."

It was such a mobilization toward the "great enterprise" of putting a man on the moon which gave direction to a whole generation of young people to enter the sciences and technologies and which gave us our current cadre of scientists and engineers -- a cadre which is not replenishing itself at this point. When even the Washington Post, which has been in the forefront of the post-industrial society faction in this country, discovers and panics over the collapse of math and science literacy in the U.S., as it did on a recent Sunday, you know that the situation is indeed serious. If we look at what drugs, rock music and PAC-MAN have done to the current generations of youth in this nation, it is eminently clear that nothing less than such a great enterprise of conquering space will restore a sense of mission to our young people.

It was the same Apollo program which gave the United States its last spurt of real productivity growth in the late sixties and early seventies. Productivity and economic growth in this country have never been a function of a "balanced budget." Such growth has come only when the government is aggressively fostering advanced technological and infrastructural development. The LaRouche-Reimann economic model has done detailed analyses of the last 25 years of U.S. economic activity and has concluded that real economic and productivity growth correlates to only two things in that time span -- the Apollo program and infrastructural development (transportation, energy -- especially nuclear energy -- generation, water projects, etc.).

I would like to quote from a report recently released by two scientists at Los Alamos, entitled the "Economic Benefits of Space Development." While not purporting to be official policy, such a statement by individuals involved in national security research makes an important point, "Space offers the opportunity to extend earth's natural resources and to exploit them more efficiently.

The classic economic problem of scarcity is thus amenable to attack through productivity increases resulting from space development." This is an important and direct attack on the neo-Malthusian notions which lurk behind much of what passes for policy-making in Washington. Last year, in testimony before this subcommittee, the NDPC suggested that the budget-cutting mania emanating from David Stockman's OMB had more to do with a commitment to a zero-growth, "post-industrial society" oriented perspective than anything else. Such a perspective is a self-fulfilling prophecy which we will lock our selves into if we fail to engage in expansive efforts under NASA or in areas such as fusion research.

Mention of the Washington Post's discovery of science and math illiteracy brings us to a final point. There is a distinct policy-making grouping within the United States and internationally which has been the most devoted advocate of the "post-industrial society," and neo-Malthusian economics. To the extent that the Soviet Union has not been convinced to go along with similar policies, the post-industrial crowd fears that the United States may now be "forced into a technological break-out mode" to use the quaint language of James Schlesinger recently. The sudden discovery, for some, of potential Soviet capabilities in the area of space-based high energy weapons systems is a product of the conclusion that the U.S. must now move into that "technological break-out mode." One point must be made clear. A corner of military research and development cannot be squirreled away and protected while the rest of our space and civilian research efforts atrophy and the post-industrial society reigns supreme. The failure to undertake a broad-based and aggressive civilian effort, in both NASA and fusion research, will imperil our vital national security interests.

Exemplary of the appropriate approach to both national security and economic development is a recent floor speech by Representative John Rhodes of Arizona,

"For the next several years, we will have to continue to rely on deterrence of aggression. But after that period of time, we should have the most sophisticated defensive systems in the world in Earth orbit, and we should by then have been able to recruit most of the world in a mutual undertaking to provide cheap energy so that all the peoples of the globe can share it its wealth and influence...I would proceed to build a consortium of interested nations to construct satellites in space to produce cheap electric energy for all, and proceed full speed to develop electric energy from fusion of the hydrogen atom....Energy plus technology plus a good labor supply plus good management can make an industrialized nation out of an underdeveloped one in just a few years...

"This is the new frontier. In years past when people got bored, there was always new land to be utilized and put to the plow. This is the new land, and American science and technology are the plows which we must use to create a peaceful, better world for all of humanity. The time to put our hands to that plow and begin the task is now."

Thank you.

STATEMENTS OF:

EUGENE N. PARKER, DISTINGUISHED SERVICE PROFESSOR, PHYSICS, UNIVERSITY OF CHICAGO

RAYMOND E. ARVIDSON, ASSOCIATE PROFESSOR OF EARTH AND PLANETARY SCIENCES, McDONNELL CENTER FOR THE SPACE SCIENCES, WASHINGTON UNIVERSITY, MO.

Senator GARN. Next, I would like to call on Eugene Parker, distinguished service professor of physics, University of Chicago, and Raymond Arvidson, associate professor of Earth and planetary sciences, McDonnell Center for the Space Sciences, Washington University in Missouri.

Gentlemen, we are happy to have you here.

Mr. Parker. I would like to thank you for the privilege of appearing before this distinguished subcommittee. I am pleased to have the opportunity to offer my personal views about the U.S. space science program. My remarks represent the views of the Space Science Working Group, a newly formed consortium of research universities and institutes which came together out of their concern for the health of the U.S. space science program, particularly university-based space science research.

We are aware that the proposed NASA budget for fiscal year 1983 has been increased. Even space science applications shows an upturn in response to operational needs for the near future. My purpose here is to call attention to the fact that there is an essential part of the space science planetary and astrophysics program in NASA that is ignored in the present budget and is being starved out of existence. I speak of the active American scientists whose ideas point the way and whose ingenuity invents the means for carrying out the scientific part of space science and astrophysics. These are the independent scientists in the university laboratories around the country whose participation in the space program has led the United States into its role as world leader in space science. Over the past 25 years these independent scientists have, with NASA support, developed the technical and scientific competence in themselves and in their support staffs to accomplish so many outstanding scientific missions, carrying through the analysis and conclusion of each mission to realize the full benefit in knowledge. Their training of a new generation of scientists and engineers has been important to NASA and to the Nation.

Reductions have been coming on for several years, but a close look at the details of the fiscal year 1982 budget and the fiscal year 1983 budget disclose a precipitous cut, amounting to emasculation of the technical competence of the independent scientists at the major universities. For example, the funding for X-ray astronomy groups at universities is experiencing a 30 to 70 percent or more drop in support in just 30 months. The termination of support means that from now to about the middle of 1983 the technical personnel whose work supports the scientists at university laboratories will seek jobs elsewhere in the country. After the middle of 1983, it will not be possible to reestablish an effective American space science program. The technical base which scientists have developed over the past decades will be lost. There will remain only Government laboratories to carry on the future space effort at a reduced level. To rebuild the technical capability would require years.

The Space Science Working Group of 20 research universities and institutes was formed this January in response to the impending terminations in the fiscal year 1983 budget. The point is, that while the proposed fiscal year 1983 budget shows an upturn in total expenditures for space science and applications, the increases are for large-scale mission operations, for setting up new mission institutes, for propulsion development, and for essential operations dropped by other agencies and picked up by NASA out of sheer necessity. The independent scientist participates in the space program through funds from NASA to develop ideas and instruments for future space missions, to build instruments for missions, to analyze the data from instruments operating in space, and to work out the implications of the result contained in the data, and then to plan the next steps for future missions again. Such efforts require a highly trained technical support staff to develop the new technology demanded by the scientific needs and to analyze the extensive data from the operating missions as part of the overall scientific effort.

But it is this funding for university science that will be so reduced over the next year that the technical staffs, whose expertise has been built up over the past 25 years of space missions, is to be dispersed. NASA has stretched out existing missions by delaying launch dates, et cetera, without providing the additional funds to keep the groups going. Missions already in space, or in the process of construction, have been canceled, with others downgraded. Most new projects remain approved but unfunded on a more or less permanent basis. For instance, Spacelab flights have been canceled so that what was once a full-blown scientific program—used as part of the justification for developing the Shuttle—is now cut back to two or three missions, all delayed, all excellent science, but hardly more than a token effort. The net result is that the independent scientist is being written out of the space program. There is no base, then, for developing the science experiments to fill the projected Shuttle flights in the late eighties. In fields as basic and as productive as solar physics and solar terrestrial physics, the only mission visible in the next 10 years is the Solar Maximum Mission, presently in orbit awaiting repairs. Both scientific incentive and financial support are evaporating for the independent scientist. It is particularly discouraging to the young blood who want to come into the field, who have to make career decisions now. The decisions are being made for them, I am afraid, by the fiscal year 1983 budget in its present form.

The United States has traditionally believed in, and continually thrived on, the importance of individual initiative in business and finance, in science and technology, in agriculture, in all aspects of our culture. Our space program has, in the past, been a shining example of the success of this philosophy.

My purpose is to urge you to restore $60 million to physics and astronomy and planetary exploration to prevent the independent scientists and their staffs from being squeezed out of the space program. This recommended investment is less than 1 percent of the total NASA budget, but the payoff is vastly greater with regard to the role of the United States in space science. The leverage which this fund has is enormous for science and technology. Japan, the European Space Agency, and the Soviet Union are moving ahead with expanded space programs of their own. If we are to play an influential role in world affairs, we cannot now afford to drop out of our conspicuous position as the leader in space. We can continue a scientifically productive space program only if it continues to include the active participation of the university scientists. I would urge you, too, to support the repair of the Solar Maximum Mission purely on scientific grounds. The SMM can do a lot more science, and without it the initatives in solar physics dwindle to nothing more than paper plans for the next 10 years.

A document which I will place in the record is the formal statement and recommendations of the Space Science Working Group. The group urges a restoration of $40 million for planetary science and $20 million for physics and astronomy to maintain the independent scientists and their technical staffs in an active role in space science.

In closing, I urge you to support these recommendations as the minimum amount necessary to sustain the Nation's space science enterprise.

I thank the members of the subcommittee for their attention and time.

Senator GARN. Mr. Arvidson.

REMARKS OF PROFESSOR ARVIDSON

Mr. ARVIDSON. Professor Parker has just discussed some of the general problems that the fiscal 1983 budget has on the space program. Professor Elliot discussed the problems with respect to the planetary program. To avoid duplication, I will focus on some aspects of the planetary program pertinent to funding at universities that is applied to research-based groups.

There are two groups of the planetary exploration program that support universities directly, and those parts deal with ongoing spacecraft, data analysis, and research. Between fiscal years 1982 and 1983, those programs are being cut 31 and 24 percent, respectively. Basic research will decrease by about 50 percent as compared to fiscal 1981. Those cuts, unfortunately, are in addition to a marked downward trend in funding since the 1970's with the planetary program, as reflected in the observation there were about 11 spacecraft launched in the 1970's while only one—Galileo—is scheduled for the 1980's.

The results of these cuts with respect to universities and university-based research in this area are catastrophic. They include shutting down existing spacecraft, not analyzing data already in hand—already bought, so to speak—closure of a number of national facilities related to space science. Most important to me, it means dispersal of talented research groups at the university that have taken, in some cases, a decade to put together with a unique scientific expertise.

While I think it is important to maintain the program, I am concerned as a citizen that we are the acknowledged leader in this field in science and technology; I am concerned we will fall behind. There is an important point that usually isn't recognized, and that is the planetary program draws a number of students into scientific and technical careers. But most importantly, the planetary program addresses fundamental questions about the origin of evolution and life, including the Earth, also new ways to examine the Earth. Let me give an example.

We have been using computer software developed to process data from Venus. By using that software to look at the midcontinent, we found a set of faults, a rift, that extends from Omaha, Nebr., through Missouri to the Mississippi Valley. That rift is the site of the largest earthquake felt in North America. This area is seismically active. Also, large lead, zinc, and copper deposits are located along the rift and appear genetically related to it. Data to identify and understand this rift have been around a decade, but it took methods documented in the planetary program to pinpoint and document this item.

Restoration of the $40 million back to the planetary program will maintain what we have. I would assert we have a longer term problem. There are plans that have no funds for the Venus mapper that would provide the data needed to understand the evolution here in the sister planet. There are plans and no funds to have a mission to Halley's comet. The Soviets, Europeans, and Japanese will be making observations. There is only one mission scheduled for 1980 and that is Galileo. I think it is time to evaluate our commitment, or more aptly stated, our lack of long-term commitment, to this historical, scientific, and outstanding endeavor associated with the planetary exploration program.

Thank you.

Senator GARN. Professor Parker, you request restoration of $60 million, and you are asking to add $40 million for planetary science and $20 million for physics and astronomy. What are the highest priority programs in each of these areas?

Mr. PARKER. I would defer to my colleague to outline for you the planetary exploration program. In physics and astronomy, it is simply a budgetary expedient to begin to move on some of the future plans. There are, essentially, no missions in the mill at the present time. The documents that I placed in the record give a detailed breakdown. The sum of $20 million is just a starvation level, subsistence program and includes no missions. It is to analyze data that are already in hand or soon will be in hand, to continue some very small projects to develop instruments and new technology that has become available to do things in the future. It is just a subsistence level.

Mr. ARVIDSON. I think in the planetary part we are not asking for anything new. We are trying to keep what we have together. It is very difficult to prioritize because less than $20 million means dispersal of groups.

Senator GARN. Thank you very much, gentlemen.

[The statement follows:]

STATEMENT OF EUGENE N. PARKER, DISTINGUISHED SERVICE PROFESSOR, DEPARTMENT OF ASTRONOMY AND ASTROPHYSICS, UNIVERSITY OF CHICAGO

I would like to thank you for the privilege of appearing before this distinguished Subcommittee. I am pleased to have the opportunity to offer my personal views about the U.S. space science program. My remarks represent the views of the Space Science Working Group, a newly formed consortium of research universities and institutes which came together out of their concern for the health of the United States space science program, particularly university-based space science research.

I would request that the full written text of my statement be included in the hearing record.

We are aware that the proposed NASA budget for FY-83 has been increased. Even Space Science and Applications shows an upturn in response to operational needs for the near future. My purpose here is to call attention to the fact that there is an essential part of the Space Science Planetary and Astrophysics Program in NASA that is ignored in the present budget and is being starved out of existence. I speak of the active American scientists whose ideas point the way, and whose ingenuity invents the means, for carrying out the scientific part of space science and astrophysics. These are the independent scientists in the university laboratories around the country whose participation in the space program has led the United States into its role as world leader in space science. Over the past 25 years these independent scientists have, with NASA support, developed the technical and scientific competence in themselves and in their ~~technic~~al support staffs to accomplish so many outstanding scientific missions, carrying through the analysis and conclusion of each mission to realize the full benefit in knowledge. Their training of a new generation of scientists and engineers has been important to NASA and the nation.

It is an interesting exercise to contemplate how little we knew of the terrestrial atmosphere, the sun, the solar system, and the universe, only twenty-five years ago, compared with what we know today. Most of the progress in knowledge, and its applications, were carried out in the United States, as a direct consequence of a deliberate national policy to involve the independent scientists. I am here today to point out that this forward thrust in American science is in the process of termination.

Reductions have been coming on for several years, but a close look at the details of the FY-82 budget and the FY-83 budget disclose a precipitous cut, amounting to emasculation of the technical competence of the independent scientists at the major universities. For example, the funding for X-ray astronomy groups at universities is experiencing a 30-70% or more drop in support in just 30 months. The termination of support means that from now to about the middle of 1983 the technical personnel whose work supports the scientists at university laboratories will seek jobs elsewhere in the country. That means that after the middle of 1983, it will not be possible to reestablish an effective American space science program. The technical base which scientists have developed over the past decades will be lost. There will remain only government laboratories to carry on the future space effort at a reduced level. To rebuild the technical capability would require years.

The Space Science Working Group of 20 research universities and institutes was formed this January in response to the impending terminations in the FY-83 budget. The point is that while the proposed FY-83 budget shows an upturn in total expenditures for Space Science and Applications, the increases are for large-scale mission operations, for setting up new mission institutes, for propulsion development, and for essential operations dropped by other agencies and picked up by NASA out of sheer necessity. The independent scientist participates in the space program through funds from NASA to develop ideas and instruments for future space missions, to build instruments for missions, to analyze the data from instruments operating in space, and to work out the implications of results contained in the data, and then to plan the next steps for future missions again. Such efforts require a highly trained technical support staff to develop the new technology demanded by the scientific needs and to analyze the extensive data from the operating missions, as part of the overall scientific effort.

But this funding for university science will be so reduced over the next year that the technical staffs, whose expertise has been built up over the past 25 years of space missions, is to be dispersed. NASA has stretched out existing missions by delaying launch dates, etc., without providing the additional funds to keep the groups going. Missions already in space, or in the process of construction been cancelled, with others downgraded. Most new projects remain approved but unfunded on a more or less permanent basis. For instance, Spacelab flights have been cancelled so that what was once a full-blown scientific program (used as part of the justification for developing the Shuttle) is now cut back to two or three sortie missions, all delayed, all excellent science, but hardly more than a token effort. The net result is that the independent scientist is being written out of the space program. There is no base, then, for developing the science experiments to fill the projected Shuttle flights in the late '80s. In fields as basic and as productive as solar physics and solar terrestrial physics, the only mission visible in the next ten years is the Solar Maximum Mission, presently in orbit awaiting repairs. Both scientific incentive and financial support are evaporating for the independent scientist. It is particularly discouraging to the young blood who want to come into the field, who have to make career decisions now. The decisions are being made for them, I am afraid, by the FY 83 budget in its present form.

The United States has traditionally believed in, and continually thrived on, the importance of individual initiative, in business and finance, in science and technology, in agriculture, in all aspects of our culture. Our space program has in the past been a shining example of the success of this philosophy.

My purpose is to urge you to restore $60 million to Physics and Astronomy and Planetary Exploration to prevent the independent scientists and their staffs from being squeezed out of the space program. This recommended investment is less than one percent of the total NASA budget, but the payoff is vastly greater with regard to the role of the United States in space science. The leverage which this fund has is enormous for science and technology. Japan, the European Space Agency, and the Soviet Union are moving ahead with expanded space programs of their own. If we are to play an influential role in world affairs, we cannot now afford to drop out of our conspicuous position as the leader in space. We can continue a scientifically productive space program only if it continues to include the active participation of the university scientists. I would urge you, too, to support the repair of the Solar Maximum Mission purely on scientific grounds. The SMM can do a lot more science, and without it the initiatives in solar physics dwindle to nothing more than paper plans for the next ten years.

A document which I will place in the record is the formal statement and recommendations of the Space Science Working Group. The

Group urges a restoration of $40 million for Planetary Science and $20 million for Physics and Astronomy, to maintain the independent scientists and their technical staffs in an active role in space science.

In closing, I urge you to support these recommendations as the minimum amount necessary to sustain the nation's space science enterprise.

I thank the Members of this Subcommittee for their attention and time.

STATEMENT OF RAYMOND E. ARVIDSON, ASSOCIATE PROFESSOR OF EARTH AND PLANETARY SCIENCES, McDONNELL CENTER FOR THE SPACE SCIENCES, WASHINGTON UNIVERSITY

The Planetary Exploration program has been a relatively small, but scientifically outstanding part of NASA's overall effort. However, the program has been decreasing at an alarming rate over the past several years. In addition, the proposed FY83 budget includes a significant reduction for those parts of the program of immediate concern to university-based research groups. Given that these cuts are superimposed on a marked downward trend in funding, the effects on university research are catastrophic for both short and long time scales.

The Research and Analysis Program is slated for a 24% cut relative to FY82, a cut that would mean a 50% reduction as compared to FY81 funding, scaled for inflation. Funds for basic research activities related to analysis of existing data, in addition to advanced planning and instrument development, come from this program. In FY81 about 2/5 of the funds from this program or about $20 million were granted to educational institutions. The proposed FY83 budget would mean a dispersal of talented research groups that have taken years to assemble and train, thereby eroding our base in science and technology in this area to a dangerously low point.

The Mission Operations and Data Analysis Program funds mission operations and preliminary analyses of spacecraft data. This program is slated for a 31% cut as compared to FY82 funding. The cut would mean that acquisition of new, unique, and scientifically important data from a number of existing spacecraft would cease. In addition, cuts in both programs would mean that a number of critical facilities, such as the Lunar Curatorial Facility, Houston, Texas, would be closed.

The planetary program has brought worldwide recognition and prestige to our country. The program has been a significant mechanism for attracting young people into scientific and technical careers, it is viewed with pride and satisfaction by most Americans, and it has stimulated development of new technologies related to operation of spacecraft located millions of miles from Earth. Of most importance in the long run, the planetary program addresses important scientific questions about the origin and evolution of the solar system, and the origin and evolution of life. The Earth is part of our solar system. Processes that have shaped the Earth have operated elsewhere in the solar system. Thus, understanding other objects in the solar system must lead to a better understanding of our own planet. Let me illustrate this point with an example.

The atmospheric surface temperature on Venus is about 900 degrees F and the pressure is about 90 times higher than the atmosphere pressure on Earth. Carbon dioxide is the dominant atmospheric constituent. Recent analyses of Pioneer-Venus data suggest that a great deal of water once existed as oceans on Venus. Perhaps because Venus was somewhat closer to the Sun, and perhaps because there were no organisms to turn carbon dioxide into sedimentary rock as they did on Earth, the ancient oceans dissipated as a hot carbon dioxide atmosphere evolved. It is thus entirely conceivable that the surface of Venus exists in a very primitive state, preserving evidence for what the Earth was like very early in geologic time, before the atmosphere, surface and interior evolved to its present state. The Venus Orbiting Imaging Radar Mission would have provided key data to evaluate this hypothesis. However, this mission is not included in the FY83 budget.

In our laboratory we have been involved recently in applying some of the techniques developed to analyze planetary data to look back at the Earth with a "planetary perspective." In particular, we have re-examined the distribution of crustal rocks underlying the midcontinent, using data that have existed for several years. Subtle variations in the gravitational field over the state of Missouri were displayed as a black and white photograph, using computer software developed for processing Viking and Pioneer-Venus data. We find a major rift (fracture zone) in the crust that runs from Omaha, Nebraska, through Missouri, and into the Mississippi River Valley. The intersection of this feature with another set of faults was the site of the largest earthquakes ever recorded in North America. The region is still seismically active. The Missouri rift is probably left over from an ancient period of continental fracturing. Of fundamental importance is the fact that many modern rifts are the sites of extensive ore deposits. Mining districts in Missouri account for over 75% of the U.S. lead production, and produce significant quantities of zinc, copper, and silver. The discovery of the failed rift provides a new perspective on the source rocks for these ores and consequently, on how to explore for new deposits in the area. The discovery is a direct consequence of applying techniques developed within the planetary program, techniques that were designed to assure maximum extraction of information from the unique data acquired during planetary missions.

Restoration of $25 million to the Planetary Research and Analysis Program and $15 million to the Planetary Mission Operations and Data Analysis Program would put us at the FY81 level, scaled for inflation. Existing research groups and programs would be retained. On a longer time scale, problems still remain. The restoration does not, for instance, include funds for further exploration of Venus or for an American mission to Halley's Comet. Yet, the Soviets, Europeans, and the Japanese are proceeding vigorously in exploring the solar system and acquiring data pertinent to understanding its history. Soviet Veneras 13 and 14 recently touched down on Venus and performed a set of technologically sophisticated measurements. The Soviets, Europeans, and Japanese have each scheduled a mission to Halley's Comet in the 1980s. The United States is rapidly falling behind in an intellectual and technological endeavor--the scientific exploration of the solar system that will long be remembered as a major achievement of the 20th century.

In closing, I thank the Members of this Subcommittee for the opportunity to present testimony and urge you to restore funds to these important space science programs.

THE SPACE SCIENCE WORKING GROUP

A consortium of research universities and institutions have joined to form the Space Science Working Group. Its members are concerned about the health of the U.S. space science program, particularly university-based research in space sciences. Of immediate concern to the consortium are further cuts proposed in the FY 1983 NASA budget. Those cuts would:

* seriously undermine the university research base of space science;

* severely deplete the next generation of space scientists and engineers.

The Space Science Working Group is recommending that $60 million be restored to the President's FY 1983 NASA budget request. Specifically,

- $40 million to Planetary Exploration (Research & Analysis and Mission Operations & Data Analysis)
- $20 million to Physics and Astronomy (Research & Analysis, Mission Operations & Data Analysis, Explorer Development and Suborbital programs)

The addition of these funds:

* is the minimum necessary investment to sustain research and graduate education programs at approximately the current levels;

* is cost-effective, yielding important advances in science and technology for an investment of less than 1% of NASA's budget.

Unlike some fields of research, perceived by industry as having immediate and profitable applications, space research and exploration can only be supported by the Federal government in view of its long range character. The Aeronautics and Space Act of 1958 instructs NASA to "contribute materially to the expansion of human knowledge of phenomena in the atmosphere and space; (and) the preservation of the role of the United States as a leader in aeronautical and space science and technology...." If NASA is to continue to execute that mandate, the Federal government must provide stable support for three types of activities at a level sufficient to attract and retain the participation of first-rate students and researchers:

1) analysis and interpretation of results from past and current space science missions;

2) future missions providing new opportunities for innovative research and exploration; and

3) support for technical and scientific activities such as detector development and laboratory investigations, which will ensure the maximum return in new discoveries from space missions.

The Space Science Working Group believes that a $60 million restoration will meet the most pressing needs in these areas.

SPACE SCIENCE AT THE UNIVERSITIES

February 1982

The U.S. space science and exploration program:

- addresses scientific questions of the highest intellectual significance;
- provides practical information about our own planet Earth;
- stimulates the development of new technology;
- brings worldwide recognition to the U.S. for its unchallenged leadership;
- attracts young people to careers in science and engineering;
- manifests a policy of cooperation with other nations; and
- is viewed with pride and satisfaction by the U.S. public.

The purpose of this document is to offer an emergency, short-term rescue operation regarding the FY 1983 budget that will prevent elimination of the universities from participation in space sciences and exploration. It will not fulfill the long-term needs which must later be carefully considered if the United States is to sustain supremacy in the space sciences.

NASA and industry look to the universities for fundamental conceptual advances in space instrumentation and research required for making spectacular discoveries. Federal support for space science at universities has declined to dangerously low levels in the last half dozen years. Further cuts as proposed in FY 1983 will irreversibly damage space science in the universities, because there are no alternative ways to support the undergraduate students, graduate students, postdoctoral research associates, engineers and technicians who carry out space-science projects under the direction of faculty members. Moreover, the universities engaged in space research are responding to proposed budget cuts by sharply decreasing the number of new graduate students being admitted to the relevant departments. If the cuts proposed for FY 1983 prevail, a whole generation of would-be space scientists and engineers will have to seek other careers.

The resulting lack of trained space scientists will cripple efforts to reinstate a vigorous space science program in later years. Many of the university laboratories are faced with obsolete equipment which they are unable to replace. Because the economic benefits derived from the space sciences are generally long-term, the private sector cannot be expected to provide support. Only the Federal government can provide for the space science and exploration in the United States.

Diminishing opportunites in U.S. space science, coupled with the reduction of funding for basic science and technological innovation in U.S. universities, are clearly perceived by our students. At the same time, support for space research is being increased overseas. These two factors will inevitably lead to a situation in which most major discoveries in space are made by foreign scientists. Due to the lack of support and the announcement of suspension of proposals for new experiments to be carried on the Shuttle, an ever-increasing portion of the instruments to be launched by the U.S. Space Shuttle will be European instruments. Aside from this humiliating situation and from a loss of national pride, we should be concerned even more about the loss of technological supremacy.

The mandate of the Aeronautics and Space Act of 1958 instructs NASA in part, "to contribute materially to...the expansion of human knowledge of phenomena in the atmosphere and space;...[and] the preservation of the role of the United States as a leader in aeronautical and space science and technology..."If the U.S. is to continue to carry out this mandate, it must provide stable support for three types of activities at a level which will continue to attract and retain the participation of first-rate students and researchers:

1) analysis and interpretation of results from past and current space science missions;
2) future missions affording new opportunities for innovative research and exploration; and
3) support for technical and scientific activities such as detector development and laboratory investigations, which will ensure the maximum possible return from both current and future space missions.

In order to meet these requirements, the Space Science Working Group urges Congress to restore $60 million to the FY 1983 NASA space science budget. The restoration of such high-leverage funding will produce an extraordinary return in science and technology for an investment of less than 1% of NASA's budget. Details of the requested restoration follow; they are presented in the same format as are the space-science components of the President's FY 1983 budget for Space Science and Applications.

Planetary Exploration

The President's budget cuts activities in planetary exploration by 25%. Moreover, this area of space science, which has contributed so much to our understanding of the solar system and which has been a source of such national pride, has not had any new mission starts since 1978. There is deep concern that the U.S. planetary exploration program will die if new missions (which numbered 32 in the 1960's and 11 in the 1970's, but only one--Galileo in the 1980's) do not soon become available. Even the last minute rescue of Galileo has not restored the planetary exploration to a healthy state.

While this problem is serious, the systematic strangulation of the whole planetary research enterprise in the U.S. by the proposed FY 1983 budget is even more so. If allowed to stand, proposed cuts would terminate the analysis of data from the Mars Viking Mission, close the Lunar Curatorial Facility and/or decimate the research programs of groups that use it, close the NASA Infrared Telescope Facility on Mauna Kea, cut back effort on the Halley's Comet Watch, cut advanced studies and instrument development by 25%, cut back analysis of Voyager data on Jupiter and Saturn, shut down the Pioneer Venus orbiter, turn off Pioneers 10 and 11 (the first spacecraft to leave the solar system for deep space), eliminate the analysis of data from the Pioneers and cut back engineering efforts to assist ongoing mission activities. If the nation is to maintain the minimum activity which will permit restoration of a healthy planetary exploration program at a later date, it is essential that funds should be restored for these purposes. The funding required to do this, including a modest allowance for inflation, is approximately $40 million in addition to that proposed in the President's FY 1983 budget.

Physics and Astronomy

Although this area of research as a whole appears to fare much better in the proposed FY 1983 budget than Planetary Exploration, closer analysis reveals that increases are largely confined to the industry-based components such as space-mission development (Space Telescope, International Solar Polar Mission Upper Stage Rocket, Gamma Ray Observatory and Shuttle/Spacelab payloads) and to the start-up of the Space Telescope Science Institute. Cuts are proposed in those components directly affecting university-based space science activities - reduction in analysis of data from High Energy Astronomical Observatory, International Sun-Earth Explorer (ISEE) and Interplanetary Monitoring Platform (IMP), cutbacks in mission operations and data analysis for the Solar Maximum Mission (not to be confused with the SMM Repair Mission), elimination of analysis of data from the Copernicus ultraviolet satellite, and inflation-induced shortfalls in the Research and Analysis Program and in the Explorer Program. Recently announced plans for stretch outs in the launches of missions such as the International Solar Polar Mission, Shuttle Experiments and Galileo--without provisions for additional funds to hold together technical teams--will make it impossible for university-based scientists to retain their skilled technical staffs. The support for approved Shuttle Experiments has been cut back over the past two years to the point where there is barely a viable program for university-based participation in the Shuttle programs of the 1980's. High Altitude aircraft programs, essential for infrared investigations, have been severely cut. The funding required to avert irreversible damage to the research base represented by these activities, including a modest allowance for inflation, is approximately $20 million in addition to that proposed in the President's FY 1983 budget.

SPACE SCIENCE AT UNIVERSITIES IN THE FY 1982 AND FY 1983 NASA BUDGETS

This report summarizes the effects of the FY82 and FY83 NASA budgets on space science, with emphasis on activities which fund research at universities. Space scientists are faced in this budget with a seemingly paradoxical situation. These budgets present severe curtailments of planetary exploration as well as other space science activities. Yet the total NASA budget shows increases in both FY82 and FY83, as does the budget of the Office of Space Science and Applications (OSSA).

The problems for university space scientists become clear only when one examines specific line items in the space science budget. Principal problem areas are:

- Planetary Exploration--research and analysis which sees a 30% cut from FY81 to FY83.
- Planetary Exploration--mission operations and data analysis in which the FY83 budget eliminates funds for tracking several unique spacecraft.
- Physics and Astronomy--research and analysis which sees an inflation-eroded rise from FY81 to FY83 of just 4%, which follows a 15% reduction from FY79 to FY81.
- Physics and Astronomy--mission operations and data analysis in which the funds for operations and analysis of *previously launched* spacecraft see only a 1% increase from FY81 to FY83 (although the total growth of this budget line is greater).
- Physics and Astronomy--Explorer development which sees only a 3% increase from FY81 to FY83, and has been essentially level for several previous years.

Table 1 duplicates the Space Science portion of the NASA budget. The last three columns are taken from the NASA budget press release (with sub-level details added for the Research and Analysis lines). The first column indicates approximately the portion of each FY81 line item which went to educational institutions. Note the importance of Research and Analysis to universities.

Table 2 summarizes increases in the FY83 proposed budget which we recommend in order to restore space science activity to approximately its FY81 level, without introducing any new initiatives.

In the following paragraphs we summarize the impacts of various budget lines.

Research and Analysis (R&A) (See table 3)

(Note there is an R&A line in each of the three space science sections--Planetary, Physics & Astronomy, and Life Sciences.)

This small part of NASA's total budget is a major source of support for basic research at universities. Programs in R&A support development of new experimental techniques, theoretical studies, and analysis of extraterrestrial materials and data from spacecraft that have been inoperative for some time. NASA's R&A budget fell 11% from FY81 to FY82 and then rises only 1% in FY83; a net loss over the two years of 10% in actual dollars and, of course, much more in purchasing power. No subcategory in R&A did better than keeping essentially level from FY81 to FY83, a loss of roughly 20% in purchasing power.

From FY81 to FY83 Planetary SR&T is cut by 25%. This line item has supported many university groups in their study of lunar samples and meteorites, and has supported the Lunar Sample Curatorial Facility (LSCF), and the Infrared Telescope Facility (IRTF) in Hawaii. The Mars Data Analysis program falls from $4.4M in FY81 to $2.9M in FY82 to complete elimination in FY83; any further Mars Analysis of Viking data would be shifted to the Planetary SR&T item; so the combination of these two items suffers a 32% cut from FY81 to FY83. Significant cutbacks of planetary work at universities can be expected from this cut. In addition, there has been discussion of closing both the LSCF and IRTF.

We estimate that the FY81 level of scientific productivity in R&A could be restored by increasing the proposed FY83 budget by $25M for Planetary R&A and $6M for Physics & Astronomy R&A.

Mission Operations and Data Analysis (MO & DA) (See table 4)

(Note there is an MO & DA line in Planetary and in Physics and Astronomy.)

The MO & DA budget is principally for operation of spacecraft and for analysis of data from operating spacecraft, and for continued analysis of data in hand from spacecraft which are no longer operational. These are activities of vital interest to many university-based scientists. In FY82 the total MO & DA budget is 12% below FY81, while in FY83 it rises to 11% above the FY81 level.

In Physics and Astronomy the net rise from FY81 to FY83 is *entirely* taken up by preparations for future missions--Space Telescope and the in-orbit repair of the Solar Maximum Mission. Total support for previously launched missions is up by only 1%. Severe cuts are made in the level of data analysis for the High Energy Astronomy Observatories and the Solar Maximum Mission. Support for analysis of data from the Orbiting Astronomical Observatory (Copernicus) is *eliminated* in FY83. The Explorer mission operations line increases to accommodate the recently launched Dynamics Explorer and Solar Mesospheric Explorer and the planned launch of the Infrared Astronomy Satellite (IRAS), but may not be adequate to permit continued operations of the International Sun-Earth Explorer (ISEE) or the Interplanetary Monitoring Platforms (IMP).

In Planetary, tracking and data analysis of all Pioneer spacecraft is *eliminated*, including Pioneer-Venus, and Pioneers 10 and 11 which are in deep space exploring the interplanetary medium beyond the orbit of Uranus. The Voyager line is decreased, preventing updates of the deep-space tracking net recommended for the Uranus encounter in 1986, but permitting continued tracking of Voyager.

We estimate that restoration to FY81 levels of MO & DA science would be accomplished by increasing the proposed FY83 budget by $15M for Planetary MO & DA and by $8M for Physics & Astronomy MO & DA.

Suborbital Programs (See table 5)

(This is a line item in Physics & Astronomy.)

Sounding rockets, aircraft, and balloons are relatively inexpensive vehicles which are essential in many university research programs. They provide relatively quick turnaround from inception of an idea to data; and they are particularly useful (with SR&T) for developing new experimental techniques for later spaceflight and for education of graduate students. From FY81 to FY83 this item shows a $7M increase, a third of which represents a shift to NASA from NSF of basic support for the National Scientific Balloon Facility. The remaining increase, about 15% over two years, must be derated for inflation at a much higher than "normal" rate, because a major portion of the airborne costs is for fuel, and a major portion of the balloon costs is for polyethelene; both of these have inflated with petroleum costs. In spite of the increases, flights of the Kuiper airborne observatory have been sharply reduced.

We estimate that a $1.0M increase over the proposed FY83 budget will restore this line item.

Spaceflight Programs

The proposed FY82 and FY83 budgets continue development of the Space Telescope and of Galileo without significant change in the program (but with substantial increases in annual expenditure, as planned for this phase of development). The budget continues to support the International Solar Polar Mission (ISPM) to the extent of US participants on the European spacecraft; the US spacecraft was deleted in 1981. The apparent increase in the ISPM budget between FY82 and FY83 is for development of the required upper stage rocket. Development of the Gamma Ray Observatory which was delayed in 1981 is now proposed to proceed in 1983, with support increasing from $8M in FY82 to $34M in FY83; the net effect of the FY81, FY82, and FY83 budgets is a 2½- to 3-year delay in this program. The Venus Orbiting Imaging Radar has been deleted from FY82 and FY83; NASA is not now planning to carry out this mission.

Spacelab payloads see a significant increase. Most of this is the natural increase in cost of instruments which are already started and are approaching flight status. However, new developments starting in FY82 are the OSS-3 payload of 3 UV telescopes and the Solar Optical Telescope. In spite of the increase of this line item, a large backlog of approved Spacelab experiments remains without development funds. Of approximately 30 experiments selected for flight in response to a highly competitive request for proposals three years ago, only three (the OSS-3) have been funded for development.

Program delays of several of these flight programs have placed severe hardships on several university science groups who require additional funds to maintain their capability over these larger programs.

The Explorer program remains as a line item with essentially level funding (i.e., loss of purchasing power by inflation). This level will permit start of the Cosmic Background Explorer but will delay start of the Extreme Ultraviolet Explorer (EUVE) and the X-ray Timing Explorer (XTE). The EUVE is an approved exploratory experiment based at a university; and the XTE is likely to be a university-based mission.

We recommend restoration of the Explorer program to its real FY81 level, by an increase of $5M over the proposed FY83 budget.

Longer-term Trend

The above analysis has focused on the FY81, FY82, FY83 trend. It is important to note, however, in tables 3 and 4 that many of the basic science programs in NASA have had approximately level or decreasing funding since about FY79. Thus, a program which remains level from FY81 through FY83 has effectively lost about 40% to 50% in purchasing power since FY79. The problems of this year's belt tightening thus come on top of a background of lean years.

Table 1. NASA Budget Plan
(millions of dollars) for Space Science
with line-by-line estimate of
university portion in FY81

	To Educ. Inst.	Budget Plan		
	FY 1981	FY 1981	FY 1982	FY 1983
PHYSICS AND ASTRONOMY	63.75	323.7	323.5	471.7
Space telescope	8.12	119.3	121.5	137.5
International solar polar . .	2.56	28.0	5.0	21.0
Gamma ray observ.	1.49	8.2	8.0	34.5
Shuttle/spacelab	8.91	27.4	40.0	81.4
Explorer devel.	2.96	33.3	33.3	34.3
Miss. oper. & data anal. . .	12.61	38.9	50.0	85.6
Research & anal.	18.95	37.7	32.9	39.2
SR & T	(12.08)	(24.2)	(21.0)	(25.2)
ATD	(1.21)	(6.5)	(5.5)	(6.1)
DA	(5.66)	(7.0)	(6.4)	(7.9)
Suborbital program	8.15	30.9	32.8	38.2
PLANETARY EXPLORATION	27.87	175.6	205.0	154.6
Galileo development	2.36	63.1	120.0	92.6
Miss. oper. & data anal. .	5.47	61.8	38.3	26.5
Research & anal.	20.04	50.7	46.7	35.5
SR & T	(17.80)	(37.5)	(33.6)	(28.5)
Mars data anal.	(2.24)	(4.4)	(2.9)	(-)
Other (ATD, Halley, IRTF)	(-)	(8.8)	(10.2)	(7.0)
LIFE SCIENCES	12.07	42.2	39.5	55.7
Flight experiments	0.88	12.7	14.0	24.0
Research & anal.	11.19	29.5	25.5	31.7

Table 2. Summary of Recommended Restorations
(millions of dollars)

PLANETARY EXPLORATION		40
Research and Analysis	25	
Mission operations & data analysis	15	
PHYSICS & ASTRONOMY		20
Research and analysis	6	
Mission operations & data analysis	8	
Explorer development	5	
Suborbital programs	1	

Table 3

RESEARCH AND ANALYSIS	FY1979	FY1980	FY1981	FY1982 March Budget	FY1982 Current Budget	FY1983 BUDGET ESTIMATE
Physics & Astronomy	44.0	33.8	37.7	38.8	32.9	39.2
SR&T	(35.2)	(21.0)	(24.2)	(23.8)	(21.0)	(25.2)
ATD	(.2)	(5.8)	(6.5)	(7.7)	(5.5)	(6.1)
Data Analysis	(8.6)	(7.0)	(7.0)	(7.3)	(6.4)	(7.9)
Planetary Exploration	44.4	45.0	50.7	51.5	46.7	35.5
SR&T	(29.5)	(33.6)	(37.5)	(37.8)	(33.6)	(28.5)
ATD	(5.4)	(5.4)	(8.8)	(8.5)	(6.5)	(5.5)
Mars Data Analysis	(4.5)	(6.0)	(4.4)	(3.2)	(2.9)	(--)
Halley's Comet Co-I's & Watch	(5.0)	(--)	(--)	(2.0)	(2.0)	(1.5)
IRTF Mid-Level Facility	(--)	(--)	(--)	(--)	(1.7)	(--)
Life Sciences	24.4	27.2	29.5	29.5	25.5	31.7
Total R&A	112.8	106.0	117.9	119.8	105.1	106.4

Table 4

MISSION OPERATIONS & DATE ANALYSIS	FY1979	FY1980	FY1981	FY1982 March Budget	FY1982 Current Budget	FY1983 BUDGET ESTIMATE
Physics & Astronomy	25.5	37.1	38.9	47.0	50.0	85.6
HEAO	9.2	(13.7)	(10.6)	(6.6)	(5.0)	(2.0)
SMM		(4.5)	(5.0)	(5.6)	(3.5)	(2.1)
OAO	2.5	(2.3)	(1.6)	(.7)	(.6)	(--)
Space Telescope Ops.	--	(1.8)	(6.7)	(15.2)	(13.2)	(32.8)
ST Maint. & Refurb.	--	(--)	(--)	(--)	(--)	(11.1)
Explorer	12.3	(14.8)	(15.0)	(18.9)	(18.7)	(28.4)
SMM Repair Mission	--	(--)	(--)	(--)	(9.0)	(9.2)
OSO	1.5	(--)	(--)	(--)	(--)	(--)
Planetary Exploration	59.3	58.8	61.8	45.8	38.3	26.5
Voyager	(16.7)	(19.0)	(29.0)	(17.3)	(17.3)	(14.0)
Pioneer-Venus	(9.0)	(8.2)	(4.7)	(5.9)	(4.0)	(--)
Pioneer 6-11	(3.1)	(2.8)	(2.0)	(1.9)	(1.6)	(--)
Flight Support	(25.3)	(26.2)	(26.0)	(20.7)	(15.4)	(12.5)
HELIOS	(.2)	(.1)	(.1)	(--)	(--)	(--)
VIKING	(5.0)	(2.5)	(--)	(--)	(--)	(--)
Total MO&DA	84.8	95.9	100.7	92.8	88.3	112.1

Table 5

SUBORBITAL PROGRAMS						
Sounding Rockets	21.3	(21.7)	(25.0)	(27.4)	(26.2)	(28.8)
Airborne Research	4.6	(4.0)	(4.5)	(5.7)	(4.2)	(5.9)
Balloon Program	2.3	(1.2)	(1.4)	(2.4)	(2.4)	(3.5)
Total Suborbital	28.2	26.9	30.9	35.5	32.8	38.2

LIST OF PARTICIPATING UNIVERSITIES

University of Maryland
University of Delaware - Bartol Research Foundation
University of New Hampshire
Massachusetts Institute of Technology
Harvard University
University of Arizona
University of Texas - Austin
University of Hawaii
State University of New York (SUNY)
Stanford University
University of Chicago
Cornell University
University of Colorado
University of Minnesota
University of California - Berkeley
California Institute of Technology
Johns Hopkins University
Washington University
Columbia University
University of California - San Diego

Other Participating Organizations

Association of American Universities
American Astronomical Society
Universities Space Research Association

A.G.W. Cameron
Chairman, Space Science Board

OVERVIEW

In past years I have had several occasions to testify on the NASA budget; the concern of the Space Science Board that I frequently expressed was that the lack of new starts is seriously compromising our capability for carrying out a national space program that addresses the most pressing scientific issues. Clearly we have now entered an even more difficult time. Not only are there no new initiatives, but we are facing the circumstance that each new budget raises the question of which already approved program will be canceled.

During the last year we have seen the effective cancellation of two missions, the U.S. spacecraft that was to be part of the International Solar Polar Mission (ISPM) and the Venus Orbiting Imaging Radar (VOIR) mission. The cancellation of those missions was not a reflection of their diminished scientific importance. Clearly the European Space Agency's portion of the ISPM will answer certain of the highest priority scientific questions for missions to high solar latitudes, but it will not provide the imaging capabilities that the U.S. spacecraft was designed to accomplish.

We have no comparable partial compensation in the case of VOIR. Our desire to understand the geological processes and the role played by plate tectonics in the terrestrial planets has not diminished in intensity or importance. The highest priority mission to address these questions remains one that can produce a map of Venus with a resolution comparable into the map of Mars provided by Mariner 9, a study that revolutionized our understanding of that planet. The scientific questions that were to be addressed by VOIR remain of the greatest importance. When resources again become available it will continue to be a mission of the highest priority in the competition for new starts.

Of particular concern must be the fate of the planetary program. I am attaching an Academy statement on the scientific importance of planetary exploration. Beyond Galileo we can see no design for continuing planetary exploration. In fact, the drastic reduction of funding for Research and Analysis and for Mission Operations and Data Analysis in the planetary sciences will de-emphasize and largely terminate planetary science research for the near future. The Administration's submitted budget proposal is inadequate to preserve a viable base upon which future activity can be built. The Space Science Board has consistently maintained that planetary exploration is an integral part of our space-science effort--one that makes a vital contribution to scientific understanding in a wide variety of disciplines. Its loss or indefinite suspension would have serious impacts that range well beyond the limits of solar-system exploration.

The FY 1983 budget proposal will preserve the strength of the national program in optical-ultraviolet and gamma-ray astrophysics. The Space Telescope and the Gamma Ray Observatory address scientific questions of the highest scientific priority in astrophysics. They, together with the extremely important Galileo mission to Jupiter, are the only major scientific initiatives left in the NASA program, and they will make major scientific advances possible.

In addition, the Explorer program remains an important source of high-priority scientific missions. Unfortunately the level of financial support for that program has failed by a large margin to keep up with inflation, and as a result we are faced with many fewer missions than the program was designed to provide. Nevertheless, the Explorer program is extremely important and deserves full support. Augmentation of the Explorer funding has been urged for a number of years by a variety of advisory bodies including the Space Science Board.

Once we look beyond these missions there is little from which to draw comfort. There is little prospect for addressing the hiatus in x-ray astronomy. At one time Spacelab was thought by some to be a critical step in the future of space science. Yet at present there is virtually no money for the development of scientific payloads to be carried aboard the Shuttle. Spacelab experiments of enormous potential have been delayed. For example, the Shuttle Infrared Telescope Facility (SIRTF), which offers a thousand fold increase in sensitivity in some IR bands--with the consequent potential for revolutionary discovery even in its initial Shuttle Sortie Flight--has been removed from the FY 83 budget despite strong support within the astronomical community and NASA. There is now talk of space platforms. Where will the science and applications instruments to be flown on these platforms come from? Who is developing them?

A DECISION POINT IN SPACE SCIENCE

Clearly we are facing a decision point in planetary exploration and, to a lesser but significant degree, in the remainder of the space sciences. Since I do not sense a consensus that it is no longer in the nation's interest to pursue a vigorous and scientifically significant program in space science, the most important question facing us must be, how do we preserve the nucleus of our national ability to carry out such a program?

The Space Science Board has addressed this issue at some length, and while there are certainly no easy answers, some principles have emerged. The first is that we must continue to analyze the rich data returned from earlier missions. It not only makes no scientific sense not to analyze these results, it is a very poor use of scarce funds to fail to receive the greatest possible return from what has come to be an ever-diminishing number of space missions. Second, we must continue to gather data from those missions that are still producing extremely important results. Two examples of such missions are the Pioneer spacecraft currently exploring for the first time the outer solar system, and the Voyager mission proceeding to Uranus and then to Neptune. A less familiar example, perhaps, is the data that can be used to search for possible variations in the force of gravity--data that can be obtained by continuing to monitor the remaining active Viking lander on Mars. Third, we must support the theoretical studies, laboratory work, and instrument development that will form the basis of future activity, or we will never be prepared to undertake those missions in a cost-effective way.

There has been considerable discussion of the need to develop lower-cost approaches to address the first-order priorities of planetary exploration. The Board agrees that this approach is important; however, the funding sought for advanced planning in the FY 83 budget is inadequate to support the needed studies, and the support for research and analysis is inadequate to maintain a scientific base upon which a restructured planetary effort would have to be built.

Of course, it is necessary to have a framework that identifies the important scientific objectives if such planning activities are to be properly focused. The Space Science Board has worked for the past five years in developing such a scientific framework, and I have included an overview of those strategies as an attachment to this statement.

Space science is facing a critical period in the coming years. Steps must be taken to make optimal use of the data we have in hand and will be obtaining. It is also necessary to ensure that a basis exists from which to undertake the most important activities. The resources needed are not necessarily large, even for these times of great budgetary pressure, but the failure to allocate and to use wisely those resources could have profound effects for the remainder of this century. If Congress determines that the exploration of the solar system remains a goal of high national importance, it should consider asking NASA to bring to it a plan showing how the capability to carry out this effort will be preserved despite budget pressures.

RESEARCH AND ANALYSIS

There are two related budgetary items that address the above concern: Research and Analysis, and Mission Operations and Data Analysis. Data analysis is supported by the latter item through the active life of a mission and for a short time after the spacecraft operations have terminated; after that the remaining work needed to obtain a full understanding of the data returned from a mission must be funded out of Research and Analysis. As the data analysis proceeds, the continuing interaction between the mission investigators and guest investigators leads to new insights into the results and new ways to analyze the data. Hence it is generally true that many years are needed before the full value is extracted from a set of mission data, and a large part of the funding for this must come from Research and Analysis. As an example, in the presence of fierce competition for funds, support for the analysis of lunar samples and other extraterrestrial materials has been continuously halved every two years since the end of the Apollo program. This work is providing basic experimental information on the origin of the solar system and the development of planetary bodies. It also provides the knowledge necessary to plan properly for future exploration, and potential exploitation, of the moon and asteroids.

In the proposed budget in Physics and Astronomy both Research and Analysis and the data analysis part of Mission Operations and Data Analysis have about the same dollar amounts as in the budget two years previously, so that the level of effort will have been eroded by inflation. The situation is more serious than this, however. It is planned to terminate the mission operations activities for the high-energy astrophysical observatories, so that the continuing data analysis for these very productive missions will have to be imposed on the Research and Analysis budget, thereby having an additional serious impact on the normally supported activities. The termination of the mission operations for the Einstein Observatory (HEAO-2), the very successful and spectacular instrument that has been responsible for an enormous advance in x-ray astronomy, is clearly very premature, since a Guest Observer program for the data from that mission will have to be eliminated. To maintain this program in a healthy condition would require $0.5 million in FY 83. The fiscal pressure on the balloon program may prevent flying the important instrument that had to be eliminated from the Gamma Ray Observatory for fiscal reasons.

Not only is it very important to obtain a full measure of scientific return from the investment in previously terminated missions, but it is vital, in the absence of new mission starts, to maximize the value of the return of data from spacecraft that are continuing to operate in space. It is thus particularly disheartening to see that the proposed FY 83 budget requires the termination of data gathering from all operating Pioneer spacecraft. The total Pioneer program requires about $8 million per year. Of this, only a small amount is required to maintain data gathering from Pioneers 6 through 9. About $2 million per year is required for Pioneers 10 and 11, and the remainder of the funds support Pioneer Venus (the spacecraft currently in orbit about Venus).

The total scientific return from Pioneers 10 and 11 has already been truly enormous. These spacecraft continue to yield unique data on the solar modulation of cosmic-ray intensity and the acceleration of charged particles in the interplanetary medium. There is in addition a major scientific objective that remains for these spacecraft. This is the discovery of the position and properties of the so-called "heliopause," the boundary between the solar-wind region surrounding the sun and the normal interstellar medium between the stars. Both Pioneers 10 and 11 are heading rapidly out of the solar system, and it is expected that they will cross and measure the heliopause boundary within the next few years (some scientists are surprised that Pioneer 10 has not already done this). These measurements are of major interest to the space plasma-physics community and to the cosmic-ray-physics community, and their loss would be a tragedy. The IMP and ISEE spacecraft still operating provide, among other data, the only measurements of the solar wind and particle and field environments in the outer regions of the Earth's magnetosphere. Not only is the continued acquisition of these data important scientifically, but it may also have important practical ramifications. Changes in solar-wind conditions produce geomagnetic disturbances that cause the aurora and, at times, disturbances in terrestrial power and telecommunication systems. Data acquisition from the spacecraft would provide the United States important measurements of its global environment.

The larger amount of support required to maintain Pioneer Venus is a measure of the important continuing activity with this spacecraft. There is an important guest investigator program that continues to investigate the properties of the upper atmosphere of Venus. Not only would this be terminated, but the funds explicitly set aside for all the data analysis from Pioneer Venus would be eliminated. If the Pioneer Venus mission can be continued, the benefits to the total scientific community will be greatly enhanced through correlative measurements made of Pioneer Venus data with the data returned from the upcoming Soviet spacecraft missions to the planet. Furthermore, during the forthcoming appearance of Comet Halley, the comet will pass within 10 percent of the sun-earth distance of Venus. Such measurements as could then be made of the properties of the Comet Halley gaseous tail by Pioneer Venus are the only remaining chance for an American spacecraft to contribute to the extensive international activities to send spacecraft to Halley.

Another existing mission that continues to be of great importance is the operation of the Thomas A. Mutch Memorial Station upon the surface of Mars. The data that continue to be returned from this station are not only important for their information about Mars, but contributes in a vital way to the improvement of our knowledge of the properties of general relativity that govern the structure of the universe within which we live. The proposed FY 83 budget does not contain the $0.3 million needed to keep this activity going.

The curtailment of the Research and Analysis and Mission Operations and Data Analysis funds for planetary sciences within the FY 83 budget can only be described as disastrous for this discipline. The level of funding is down to nearly half of what it was in FY 81, and this, combined with the lack of adjustment for inflation, will have a far-reaching impact on support for planetary sciences. If these cuts are sustained, between 25 and 50 percent of the normal support activities in the various planetary-science program offices will have to be eliminated.

The proposed budget would require the elimination of support for the Infrared Telescope in Hawaii (IRTF), which provides vital ground-based observations in support of the planetary-science program. IRTF continues to provide critical mission planning data for the Voyager spacecraft and is a necessary complement to the Galileo mission. In addition, it provides a testbed for development and refinement of IR instrumentation for future planetary sciences and astrophysics missions. At a time when there are unlikely to be new planetary-science mission starts for several years, a facility such as this provides important new data that allow continuing scientific work in the planetary sciences community and enrich our understanding of the data collected from spacecraft. Operating the telescope would require $1.5 million per year.

Of particular concern is continuing support for the Lunar Sample Curatorial Facility at the Johnson Space Center. Not only does this facility exercise curatorship over much of the lunar sample collection, but it also is responsible for an important part of the meteorites in the United States, namely those collected in recent years from Antarctica, where environmental conditions have both concentrated the meteorites (making them easier to find) and minimized the effects of weathering on them. This facility is vital for the continued research on extraterrestrial materials that is supported by both the NSF and NASA. An important new function is the collection of interplanetary dust particles in the Earth's atmosphere. These particles are generally believed to be largely derived from comets and represent a totally new approach to the study of these primitive objects. To maintain minimum operations requires $0.8 million per year; to maintain proper curatorial activities requires double that.

The effects of eliminating up to 50 percent of the ordinary research and analysis programs from the planetary-sciences offices can only be described as a widespread tragedy for the disciplines involved. We will not receive a full scientific return from the recent investments that we have made in planetary-science missions. We will not be able to provide the needed support for theoretical studies and laboratory work required for a proper understanding of the returned data. We will not be able to invest in instrument development and mission studies in order to plan cost-effective and science-effective missions for future new starts.

The deficiencies in Research and Analysis and Mission Operations and Data Analysis funding in the space sciences fall particularly heavily on the academic space-science community. University scientists are especially productive in the generation of new scientific and technological ideas, and they have the task of inspiring and instructing the new generations of young scientists. The space program can ill afford the damage that the proposed FY 83 budget would do to this university community.

THE U.S. PLANETARY SCIENCE PROGRAM

The space-science program is a significant factor in maintaining the nation's continuing leadership in science and technology. Space science endeavors throughout the solar system make crucial contributions to the advance of both science and technology. The United States' Aeronautics and Space Act specifies that exploitation of the nation's capability in space to advance scientific understanding of the Earth, of the solar system, and of the universe as a whole is to be an essential activity of the National Aeronautics and Space Administration. This mandate is consistent with sustained efforts to investigate the character, evolution, and origin of these systems as well as to ascertain the character of natural laws and the ways in which these laws act to shape the world around us. The resulting investigations are of great significance in the history of modern science. Furthermore, information gathered through research in each of the major areas of space science is basic to the growth of our knowledge. Most of the important scientific questions are interrelated; continued increase of our knowledge in these areas demands the kind of broad approach to scientific questions that is contained in the integrated recommendations put forward by the Space Science Board during the past 23 years.

Accomplishments and discoveries of the two-decade-long solar-system exploration program have contributed fundamental information to our picture of the world and have stimulated the development of ideas about the nature of phenomena in the solar system and beyond. These first exploratory endeavors have left a legacy of important questions. The goals of planetary exploration are: to discover clues about the events and processes that lead to the formation of the solar system; to understand how planets behave and evolve and how their environments were formed; to discover the limits of stability of terrestrial environments; to learn what physical and chemical conditions lead to the appearance of life; and to discern how physical laws act under conditions that are neither achievable in the laboratory nor otherwise directly accessible.

In addition to making such basic contributions to scientific knowledge, planetary exploration constitutes one of the great endeavors of civilization. Our exploration of the solar system is producing an extension in the reach of human experience that has only a few precedents in human history; the ultimate consequences of this expanded compass of knowledge and experience are not yet clear, but no doubt they will be large.

The question has been raised whether the planetary investigation program already has accomplished most of its important goals and thus has little remaining to do of primary scientific significance. During recent years the Space Science Board has repeatedly called attention to important new primary scientific goals in planetary investigations as well as in other areas of space science. The results of scientific space explorations carried out by this nation as well as by others have revealed clearly the significance of the scientific questions addressed by the planetary program. The program continues to address fundamental questions of science, and most of the data returned could be obtained in no other way.

Few other scientific activities arouse similarly widespread popular interest, but popular interest simply complements the depth of the scientific activity.

The Continuing Challenge

Certainly one of the major objectives in modern science is to comprehend the origin and evolution of our own solar system, and then to comprehend more generally the formation of stars and planets in the Galaxy and in the Universe. Large conceptual advances have been made in recent years. Our picture of the general conditions and circumstances of star formation has been sharpened by numerous telescopic studies of stars and the interstellar medium, while at the same time our detailed knowledge of the solar system has grown explosively, considerably sharpening our understanding of this system's history. Abandoning either of these paths of investigation would greatly inhibit continuing growth of knowledge. For example, a question of the deepest intellectual and philosophical significance is whether habital systems such as our own are nearly unique in the Universe or rather are commonplace. This question cannot be approached without scientific attacks on both the astronomical issues and the solar-system questions. This is a particularly clear example of the need for a broad and unified approach to major questions of cosmic science--but it is only one of many examples.

We have in front of us a potentially fertile class of spacecraft investigations that has not even begun, aimed at elucidating the origin of the solar system. Comets and asteroids are believed to constitute the best preserved and most primitive remnants of the matter from which the solar system formed. Detailed study of these objects and their constituent material promises to reveal crucial and unique information about the origin of the solar system--information that can be acquired in no other way.

Even for the Earth sciences, answers to many of the major questions will depend on our deepening comprehension of the planets. The underlying organizing principles for our understanding of many geophysical phenomena are contained in our ideas about continental drift--or plate tectonics--and its connection to the slow convective motions of Earth's mantle material. Yet the circumstances that are essential to producing these fundamental Earthly phenomena are not well understood. By way of comparison, both Venus and Mars are similar to the Earth in size and composition, as well as location in the solar system. Mars apparently evolved through a totally different tectonic regime; Venus may yet be different from both Earth and Mars--we will never know without a detailed study of the structure of the Venusian surface. Our understanding of the global processes that shape planets, including the Earth, will remain incomplete until we have achieved a unified understanding of the terrestrial planets as a class.

Similar and perhaps more crucial challenges to our understanding confront us on the surface of Mars. The scars on the surface of the planet tell of a dynamic history. Mars evidently has gone through large changes of climate and environment during its history. How susceptible is the Earth to similarly large environmental change, and what physical circumstances may precipitate it? Such questions press at us more and more insistently as our own influences on the Earthly environment grow ever larger and more numerous.

Investigations of the outer planets have begun well with the Pioneer and Voyager exploratory missions. We are beginning to frame significant scientific questions for continuing studies in that part of the solar system. The large variations in composition among the four giant planets clearly carry information about processes that formed the solar system. There are major questions about how the similarities and differences among the satellite systems of the outer planets relate to their formation and to that of the planetary system. We are taking early steps toward extracting the information that these objects hold. Intensive study of Jupiter and its satellite system would be an excellent first step to that end.

As we have continued exploration of the planetary system, new questions have come into focus and ways have opened to gain the answers to long-standing questions. Although confident prediction of what new avenues will open in the course of contained research is impossible, planetary science is in the midst of a most fruitful era--one in which new efforts are consistently rewarded by new knowledge and insights.

As elements of the nation's program in planetary exploration, the Space Science Board views the continuing Galileo mission to Jupiter and the deleted VOIR mission to Venus as addressing scientific objectives of the highest priority. The Board's Committee on Planetary and Lunar Exploration is studying the extent to which less elaborate missions can achieve some major scientific objectives. A flexible approach to planetary exploration, relying on a variety of spacecraft missions ranging from large comprehensive missions to simpler missions of more modest cost, may be able to achieve the scientific objectives and provide the programmatic flexibility needed to respond to budgetary exigencies.

The Space Science Board also believes that steps should be taken to identify areas of potential international cooperation in space science. Such cooperative endeavors, using pooled resources in areas of mutual interest and complementary capabilities, could be beneficial to both sides. Successful cooperation will require that both sides maintain independently viable programs as well as stable and confident commitments to agreed upon objectives.

Each Administration and each Congress is faced with difficult decisions on the overall level of support of science and the allocation of funds between scientific fields. In this regard there is no evidence that the planetary exploration program has exhausted its major objectives. The outstanding objectives of this area of science and exploration reflect first-order scientific questions of the highest intellectual significance. The scientific and technical value to society argues forcefully for serious consideration of this field in the distribution of federal research funds.

STRATEGIES FOR SPACE SCIENCE

Since 1975, the Space Science Board has worked with its committees to define scientific strategies looking forward approximately 10 years and attempting to identify the most important areas in which significant progress can be made. These strategies are designed to provide a framework within which detailed mission design and development can occur. The remainder of this document outlines the highlights of the strategies developed to date.

SOLAR-SYSTEM EXPLORATION

The Space Science Board's Committee on Planetary and Lunar Exploration (COMPLEX) has formulated a strategy to guide solar-system exploration over approximately the next decade. The strategy is divided into three integrated parts: the inner-solar-system planets (Mercury, Venus, Earth and its moon, and Mars); the outer-solar-system planets (Jupiter, Saturn, Uranus, Neptune, and Pluto); and comets and asteroids. This division is based on fundamental characteristics of these three classes of objects. Most of the outer-solar-system planets apparently formed at low temperatures and trapped large quantities of volatile material from the preplanetary nebula. The four rock and metal planets of the inner solar system consist primarily of minerals that condense at relatively high temperatures and that apparently accreted to form planetary bodies without carrying along large quantities of highly volatile substances. The planets of both the inner and outer solar system have in common the quality of having formed with enough internal energy to drive continuing evolution. This energy has erased evidence of the formation processes and altered the character of planetary material since the time of formation. By contrast, the smaller solar-system objects--especially comets and asteroids--did not contain enough internal energy to maintain their evolution. In these bodies the character of solar-system material at the time of formation is relatively well preserved; also, evidence of early energy sources and metamorphic processes, which have been obliterated on planets, are apparently preserved in some of these primitive bodies.

For the decade running through 1985, COMPLEX recommends that outer-solar-system exploration extend to Uranus. The targets for investigation in this time period are Jupiter, Saturn, and Uranus, along with their satellite systems. A recommended level investigation of Jupiter was accomplished by the Pioneer and Voyager spacecraft, and the committee recommended that a major undertaking during the decade be an exploratory investigation of Jupiter, its satellite system and magnetosphere. The primary recommended objectives are to determine the chemical composition and physical state of Jupiter's atmosphere and satellites and to explore the planet's magnetic field and energetic particle fluxes. The Galileo mission, being developed to accomplish these objectives, will employ an atmospheric entry probe as well as a Jupiter orbiter that will explore the magnetosphere and make numerous close passes to several satellites.

The committee also recommended that reconnaissance-level investigations of both Saturn and Uranus be accomplished during the decade. Aspects of these recommendations are expected to be satisfied through planetary fly-bys involving the Pioneer and Voyager spacecraft. Looking forward, COMPLEX regards exploratory investigation of Saturn as the next step in continuing study of outer solar system beyond 1985.

For the inner solar system, reconnaissance-level investigations are completed, and COMPLEX recommends that the strategy focus on Venus, Earth, and Mars. This choice is based on the belief that these three bodies pose a fundamental and well-defined challenge to our understanding of planets. The atmospheres of these bodies span a range of 10^4 in density; Mars' atmosphere is about one hundredth of Earth's; Venus' atmosphere is about one hundred times that of Earth. These differences are large in comparison with other variations in the planetary properties as we perceive them. The differences are intriguing since they reveal widely divergent evolutionary paths of three planets whose early history and formation were similar. The "air"-less bodies of the inner solar system, Mercury and the Moon, are relegated to a lower priority for the decade.

Since the Viking mission to Mars, we know more about that planet than any other except Earth and the Moon. Our investigations of Mars have posed new questions that challenge our understanding in important ways. The recommended primary objectives include establishing the composition, chemical, and physical character of the surface in its many domains, determining the nature and chronology of surface-forming processes and the inventory and distribution of volatile substances, exploring the structure and circulation of the atmosphere, exploring the character and dynamics of the interior, and establishing the planet's state of magnetism and its solar-wind interaction.

Venus has recently been investigated by the Pioneer-Venus mission, which studied its atmosphere and solar-wind interactions through the use of several atmospheric probes and orbiting spacecraft. The major science objectives recommended to carry Venus investigation through the decade to 1987 are to obtain a global map of the Venusian surface in sufficient detail to determine the processes that have shaped its topography, to ascertain the composition of the planet's surface material and its interaction with the atmosphere, and to explore important photochemical processes in the atmosphere that are analogous to processes in the Earth's atmosphere.

Maps of planetary surfaces have a profound impact on our understanding, because those surfaces contain records of the dominant processes that have sculpted the terrestrial bodies. For example, maps of Mars reveal earlier episodes of erosional processes that cannot occur in the present Martian climate. Conditions on Mars must have been very different in the past and this raises questions about the stability of planetary environments. Venus is shrouded in clouds, its surface hidden until only recently when the earth-based and Pioneer-Venus orbiting radar revealed the first pictures of Venusian topography, which is distinctly different than that of the Earth and Mars. An important goal for the next decade of studies on the inner solar system is construction of a more detailed map of Venus' surface using larger orbiting radars.

Investigation of comets and asteroids will provide essential information about early processes in the solar system. Comets are generally believed to have formed in the outer portion of the solar system, at least beyond the orbit of Saturn, where temperatures may have been low enough to preserve some chemical record of the initial solar nebula. Their chemical composition represents important information about the pre- and early solar system. Asteroids are usually thought to have formed within the orbit of Jupiter, and the greatest bulk of current asteroids now lie in a belt between the orbits of Mars and Jupiter. Current evidence indicates that there are structural and chemical variations across the belt, thought to reflect the conditions of the solar nebula at the time of their formation.

The primary scientific objectives for cometary exploration through 1990 are to determine the composition and physical state of a comet nucleus, the processes that govern the transition of volatile material from the solid nucleus to the gas or atmosphere surrounding the nucleus, and to study the interaction of the comet and the solar wind. To accomplish this, it will be necessary to observe the comet's changing state during its closest passage around the Sun. The recommended objectives for asteroid exploration through 1995 are to determine their composition and bulk density, to investigate their surface topography, and to determine their internal properties.

In order to address these primary objectives, rendezvous mode investigations are required; in the case of comets, with at least one active comet, and in the case of asteroids, with a number of asteroids to sample their diversity.

ASTRONOMY AND ASTROPHYSICS

Exploration continues to play a paramount role in astronomy. Information about distant parts of the Universe is meager, while unexpected phenomena are still being discovered even in the Sun, and in our own and relatively nearby galaxies. Despite the incompleteness of our knowledge, the discoveries and the explorations are made within a general understanding shared by the vast majority of astronomers. This commonly accepted "Grand Design" serves as a framework into which astronomers try to fit new discoveries. At the same time, the general conceptual framework may need to be modified as a result of new discoveries and theoretical insights.

Each field of science develops techniques appropriate to its problems. Astronomy, by virtue of the vastness of the Universe and our inability to perform experiments on it, of necessity has been the most purely observational science. It proceeds by looking at the richest feasible selection of objects across the widest possible range of wavelengths, first to discover what exists, then, by classifying and comparing, to begin to understand. Insight begins to come with the creation of theoretical models based on and interactive with the best available physics. Astronomy has often stretched physics to its limits and now promises to test it in realms beyond the hope of laboratory work. The space-astronomy programs developed in the remainder of this document stress these essential aspects of the field:

- o The discovery of novel entities, frequently as a result of opening up new ranges of observation;
- o The finding of many examples to permit classification and study of interrelationships;
- o The detailed analysis of selected members of the group by each available technique;
- o The development of theoretical models; and
- o The carefully conceived observational tests of the evolving theoretical framework, even of the physical laws themselves.

To carry out this program requires all the resources of astronomy, with ground-based optical and radio observatories continuing to have a major role. As just one example from many, x-ray binary stars, first discovered by satellite observations, were soon also detected by optical and radio telescopes, and a preliminary theoretical understanding of their nature was worked out rapidly. Even the more familiar objects often need the widest possible range of wavelength of observation for use to really understand their properties. Ideally, if suitably sensitive instruments were continuously available for all spectral regions, our insight into the Universe would increase dramatically. Although astronomers hope eventually to reach such a goal, at present it is neither feasible nor necessary to do so. What is needed is an orderly progression of inquiries into the diverse objects and effects, near and far, that populate the cosmos. Some can be carried out with existing technology, while others require extensive development.

The recommended detailed strategy is based on many considerations. Foremost are the scientific questions--the quantity and quality of fundamental results to be expected and their relevance to other fields of astronomy and science or to important applications. But the science develops in a context of constraints. The strategies take account of spacecraft development, propulsion capability, and new instrumentation, also of scheduling within the ongoing space program, the continuity of effort within the various scientific disciplines, and budget limitations.

The strategy for the decade has as its focal point the establishment of long-lived observatories in space. The Space Telescope will provide a tool of unprecedented power for uv- and optical-astronomy. The Gamma Ray Observatory will provide the capability from the first systematic study of the Universe at very high energies. Later in the decade, the planned Advanced X-Ray Astronomy Facility will provide the mature observatory necessary to explore the richness of the x-ray sky revealed by the Uhuru and Einstein satellites.

With appropriate support, the decade will also witness the exploitation of the enormous advantages of space for IR astronomy. Cooled telescopes, free of the obscuration and thermal background of the Earth's atmosphere, will carry out deep surveys and detailed studies of star-forming regions, galactic nuclei, and interstellar clouds. An explorer (IRAS) to be launched in late 1982 will perform an initial survey of the IR sky. A planned Shuttle Facility (SIRTF) promises gains of 100-to-1000-fold in sensitivity compared with existing instruments. Later in the decade, astronomers are planning an instrument for studying the wavelength range between 0.1 and 1 mm--a region well-suited for study of star-forming regions and the flux from external galaxies.

Three major Explorers are planned that will carry out fundamental surveys: the Cosmic Background Explorer (COBE) will study in detail the background radiation presumed to arise from the primordial fireball; the Extreme Ultraviolet Explorer (EUVE) will provide a survey of the sky between the x-ray and ultraviolet regions; the X-Ray Timing Explorer (XTE) is planned to obtain high time resolution studies of selected x-ray sources in order to explore the physics of extraordinarily compact objects such as neutron stars.

These missions will permit astrophysicists to exploit the major advantages of space in permitting the study of objects over broad energy ranges, at high sensitivities, and with fine spatial and/or time resolutions. Astronomy is at the stage where the discoveries and observations needed for major leaps in understanding require the specific tools described in this strategy.

SOLAR SYSTEM SPACE PHYSICS

The sciences we now call collectively solar and space physics began their development early in the history of Western thought. The ancient Greeks were puzzled by the "fire" in the upper atmosphere that today we call the aurora. Galileo discovered sunspots in 1612, and in the succeeding centuries it was established that the number and size of sunspots increased and decreased with approximately 11 year-periods. Moreover, there proved to be correlations between the spots on the Sun, the intensity and location of the aurora, and fluctuations in the Earth's magnetic field. Until recently, neither experimental nor theoretical understanding was sufficient to provide any reason based on physics for the mysterious relationship between activity on the Sun and auroral and magnetic activity at Earth.

Twenty years of space research have given us a physical basis to address this relationship. The Earth has an atmosphere, above the one we breathe, made of electrically conducting, ionized gas--a plasma. Since the Earth's magnetic field controls the structure of this plasma atmosphere, we call it the magnetosphere. The Sun's outer atmosphere--the corona--generates a magnetized plasma wind that blows throughout interplanetary space and interacts with each of the planets. At Earth, this interaction causes strong highly variable motions within the magnetosphere and fills it with solar-wind plasma. Recently, we have begun to understand how the solar wind is related to the structure of the magnetic fields in the corona and to the processs generating these fields in the solar interior. Moreover, we have realized that solar-wind-generated magnetospheric activity drives strong winds in the Earth's upper atmosphere. Thus, whereas once we knew only that auroras intensify when there are sunspots, we now perceive the chain of interactions that links events at the Sun's surface to the solar wind and, hence, to the magnetosphere and atmosphere, only one of whose consequences is the aurora. This interaction chain may extend deeper into the atmosphere. Whereas 10 years ago it was generally believed that significant effects of solar variability penetrate only as far as the upper atmosphere, some scientists now suggest that they also reach the lower atmosphere and so affect weather and climate in ways not yet understood. Although the sunlight intercepted by the Earth is the only obvious agent connecting the sun with weather and climate, the question of a more subtle solar-terrestrial influence, while still controversial, is so important that we must try to answer it.

Solar-system space research is becoming a quantitative science. As a consequence, it is now yielding useful understanding of solar-terrestrial effects on technological systems in space and on Earth. One example is understanding the effects of ionospheric variability on radio communication. Another is understanding the disruptions of electric power grids and pipeline monitoring systems, and the spacecraft component failures, that take place during magnetic storms. The increasingly quantitative nature of our understanding also means that solar-system space research now makes important contributions to basic plasma physics, in areas such as magnetic field-line reconnection, which is thought responsible for explosive energy releases in solar flares, magnetospheric substorms, and fusion devices.

Twenty years of space research have taught us that the physical processes that we study at the Sun, in the solar wind, and at the Earth, occur throughout the solar system and indeed the astrophysical universe. We now study the interactions between the planets (and comets) and the solar wind in mutually reinforcing ways. Our experience with the Earth's magnetosphere was essential first to design the recent Pioneer and Voyager studies of Jupiter's magnetosphere and then to understand their results. Understanding how the Sun and planets generate their magnetic fields may help to explain why magnetic fields are so prevalent throughout the Universe. Stars like the Sun that have convective outer layers are inferred to have stellar winds; more massive stars have winds driven by radiation pressure. Plasma winds may also be generated in globular clusters and galactic halos; relativistic winds have been proposed for pulsars and radio galaxies. Thus, the term "magnetosphere" is used not only for the Earth and planets but also for the environments of x-ray sources, pulsars, and radio galaxies.

Two basic principles guided the design of the strategy for solar-system space physics. The objectives of solar-system space research are to understand the physics of the Sun; the heliosphere; and the magnetospheres, ionospheres, and upper atmosphere of the Earth, other planets, and comets. Studies of the interactive processes that generate solar variation and link it to the Earth should be emphasized, because they reveal basic physical mechanisms and have useful applications. Quantitative understanding of the solar-terrestrial interaction chain can provide a better basis for answering the question of whether solar variability affects weather and climate.

To understand better all the processes linking the solar interior to the corona, we need to study: the Sun's global circulation, how it reflects interior dynamics, could modify luminosity, and is related to the solar cycle; the interactions of solar plasma with strong magnetic fields--active regions, sunspots, and fine-scale magnetic knots--and how they cause the release of solar-flare energy to the heliosphere; and the solar corona's energy sources and the physics of its large-scale weak magnetic field.

The solar wind has been studied near the Earth since 1961. In the past decade, measurements of the solar wind in the ecliptic plane were extended to within Mercury's orbit (0.3 A.U.) and beyond Saturn (9.5 A.U.). Quantitative models of high-speed solar-wind streams and flare-produced shocks were developed and tested against data obtained near the ecliptic. The realization that high-speed streams originate in the rapidly diverging magnetic-flux tubes of coronal holes reoriented much solar-wind research. The sector structure of the solar wind was related to a magnetic neutral sheet of solar-system scale that connects to the large-scale magnetic field of the rotating Sun. Finally, microscopic plasma processes were shown to regulate solar-wind thermal conduction and diffusion and, possibly, local acceleration of particles in solar-wind structures.

To understand better the transit of energy, momentum, energetic particles, plasma, and magnetic field through interplanetary space, we need to study: the coronal processes that govern the generation, structure, and variability of the solar wind; the three-dimensional properties of the solar wind and heliosphere; and the plasma processes that regulate solar-wind transport and accelerate energetic particles throughout the heliospere.

Our understanding of many individual processes became more quantitative. The coupling of magnetospheric motions and energy fluxes to the thermosphere was observed and modeled. Currents flowing along the Earth's magnetic field and connecting the polar ionosphere to the magnetosphere were found to create strong localized electric fields at high altitudes. These fields may accelerate the electrons responsible for intense terrestrial radio bursts and auroral arcs. Thus, the problem of auroral particle acceleration is nearing quantitative understanding. By contrast, the relationship between energy circulating in the magnetosphere, the energy dissipated in the atmosphere, and the state of solar wind could not be understood much more quantitatively in 1979 than in 1969.

To understand better the time-dependent interaction between the solar wind and Earth, we need to study: the transport of energy, momentum, plasma, and magnetic and electric fields across the magnetopause; the storage and release of energy in the Earth's magnetic tail; and the origin and fate of the plasma(s) within the magnetosphere: how the Earth's magnetosphere, ionosphere, and atmosphere interact.

To understand better the entire upper atmosphere as one dynamic, radiating, and chemically active fluid, we should study: the radiant energy balance, chemistry, and dynamics of the mesosphere and stratosphere and their interactions with atmospheric layers above and below; the worldwide effects of the magnetosphere's interaction with the polar thermosphere and mesosphere and the role of electric fields in the Earth's atmosphere and space environment; and the effects of variable photon and energetic particle fluxes on the themosphere and on chemically active minor constituents of the mesosphere and stratosphere.

To understand better the effects of the solar cycle, solar activity, and solar-wind disturbances upon Earth, we need to: provide to the extent possible simultaneous measurements on many links in the chain of interactions linking solar perturbations to their terrestrial response and create and test increasingly comprehensive quantitative models of these processes.

To clarify the possible solar-terrestrial influence on Earth's weather and climate, we need to: determine if variations in solar luminosity and special irradiance sufficient to modify weather and climate exist; ascertain whether any processes involving solar and magnetospheric variability can cause measurable changes in the Earth's lower atmosphere; and strengthen correlation studies of solar-terrestrial, climatological, and meteorological data.

To understand better the interactions of the solar wind with solar-system bodies other than Earth, and from their comparison learn about astrophysical magnetospheres in general, we need to: investigate in situ Mars' solar-wind interaction in order to fill an important hole in comparative magnetospheric studies--previous missions provided little such information; make the first in situ measurements of the plasma, magnetic fields, and neutral gases near a comet; increase our understanding of rapidly rotating magnetospheres involving strong atmospheric and satellite interactions, by orbital exploration of Saturn; and illuminate the role of atmospheres in substorms and other magnetospheric processes by orbital studies of Mercury--the only known magnetized planet without an atmosphere.

GRAVITATIONAL PHYSICS

Gravity is exceedingly weak on the scale of atoms--far weaker than the other three forces of Nature ("electromagnetic," "strong," and "weak"). However, on larger scales where the other forces "saturate," gravity dominates. Consequently, the larger the scale of an experiment, the more effectively it can probe the laws of gravity. Earthbound experiments are moderately good probes; but experiments in space--making use of the Earth's full gravitational potential and the much stronger gravity of the Sun--are much better probes. Thus, it is that probes of the laws of gravity fall largely within the province of NASA, while probes of the other laws of physics are mounted by Earthbound agencies.

Most but not all physicists believe that the laws of gravity, as formulated by Einstein in his general relativity theory, are likely to be correct everywhere except in the big-bang origin of the Universe and at the very centers of black holes. But experiment must be the ultimate test of Einstein's laws. Before the space program was created, Earthbound experiments had tested one non-Newtonian prediction of Einstein's theory, the red shift of light climbing up through the Earth's gravitational field, to an accuracy of 1 percent, and had tested others to accuracies of about 10 percent. By the end of the 1970's, radio tracking data from many different spacecraft and laser beams reflected from corner reflectors placed on the moon by the astronauts had improved these tests one-hundredfold and had created important new tests. But at the same time, astronomical discoveries (quasars, pulsars, cosmic fireball radiation; neutron stars and tentative evidence for black holes) were making it more crucial than ever that we know whether Einstein's laws of gravity are correct.

The Space Science Board's Committee on Gravitational Physics, guided largely by the needs of astronomers in deciphering the mysteries of the distant Universe, established two rank-ordered lists of scientific goals for NASA's Gravitational Program in the 1980's. The first list involves a class of experiments that either require a dedicated spacecraft or have a major impact on a spacecraft; the second list contains experiments involving Earth-based measurements or small additions to spacecraft constructed primarily for other purposes. A brief description of these goals follows.

Just as the electromagnetic force can be broken into two pieces, electricity and magnetism, so according to Einstein, the gravitational force can be broken into three pieces, one electric-like, one magnetic-like, and one a "curvature of space." The electric-like force and the curvature of space have both been probed by past experiments; but no experiment has ever clearly verified the existence, much less the details, of the magnetic-like gravitational force. That force is exceedingly weak in the solar system but is predicted to be ultrastrong near a rotating black hole and is theorized by many astrophysicists to be the ultimate agent by which supermassive black holes store energy and use that energy to power quasars. Thus it is crucial for astrophysics to verify the existence of the magnetic-like gravitational force and test Einstein's predictions of its details. The one way in which we can do this in the 1980's is by measuring the "dragging of inertial frames by the Earth's rotation"--a manifestation of the magnetic-like force. This can be done using superconducting gyroscopes flown in a specially constructed Earth-orbiting satellite, NASA's proposed Gravity Probe B. Such an experiment has been given first priority in the special-spacecraft class.

The second priority is an experiment to measure the "gravitational quadrupole moment" (i.e., gravitational flattening) of the Sun--a crucial unknown input into the interpretation of past experiments on the "nonlinear superposition" law of gravitational fields and also a phenomenon of interest in its own right for solar physics. The third priority is a measurement, for the first time, of the "nonlinear" effects of gravitational fields on the ticking rates of clocks. These two experiments, solar flattening and clock ticking, might be carried out by NASA's proposed "Starprobe" mission; the solar flattening might also be measured by several years of tracking of a spacecraft in orbit around Mercury.

In the second category, experiments entailing Earth-based measurements and minor additions to space missions, the highest priority is to utilize effectively every opportunity to improve our knowledge of the orbits of the inner planets--Mercury, Venus, Earth, and Mars--and of the Moon. These orbits contain a plethora of detailed information about the laws of gravity--information encoded in a very precise form that includes details of the electric-like force, the curvature of space, and (in a form hard to deciper) the magnetic-like force; the superposition laws for these forces; and details of any change with time of the universal constant of gravitation. Such a change with time would be crucial for the origin and evolution of the universe but would leave only miniscule imprints in the solar system. The measurement of the planetary orbits requires a painstaking accumulation of data at frequent intervals over tens of years, data from radio tracking of spacecraft, laser beams, bounced off the Moon, and radar beams bounced off the planets, data that should be accumulated at every opportunity, producing a legacy for future generations to work with.

The attempt to detect cosmic gravitational waves has second priority in the minor-addition class of experiments. Gravitational waves are not only an unverified feature of relativistic gravity; they are also a powerful potential tool for astronomy--a tool that one day may produce a revolution in our understanding of the Universe comparable with that recently produced by Earth-orbiting x-ray telescopes. If the prospects were high for successful gravitational-wave detection in the 1980's by spaceborne systems, gravitational waves would have first priority in the Gravitational Physics Program. Because prospects are small, they have second priority. The goal should be to equip interplanetary spacecraft of the 1980's, constructed for other purposes, with instrumentation (primarily a capability for radio tracking at ~8 gigahertz (X-band) on both uplink and downlink] that is as sensitive as possible to the effects of gravitational waves.

Third priority is the development in the 1980's of new technology and instrumentation for use in gravitational experiments of the 1990's. The highest priority instruments are (a) an improved radio tracking system for spacecraft; (b) an optical interferometer to be flown in Earth orbit for measuring positions of stars to unprecedented accuracies; and (c) design studies for an optical-heterodyne gravitational-wave detector to be flown in space. The radio tracking system and the optical interferometer could be used in experiments that improve a hundredfold or more the accuracy of tests of Einstein's gravitation theory. The optical heterodyne system would have good prospects of detecting and studying gravitational waves from distant binary stars, nova explosions, quasars, and violent galactic nuclei.

EARTH SCIENCE FROM SPACE

This strategy is the first phase of an integrated strategy for earth sciences from space for the decade of the 1980's. It is a basic premise of this strategy that our knowledge of the Earth has expanded to the degree that a unified or global concept must be adopted as the basis for fundamental questions on future exploration. This premise also places the Earth in a planetary perspective. Planet studies have in common: the composition and structure of their surfaces, which provides basic information on their evolution; the dynamics of the surface and interior, which can be directly related to the distribution and transfer of internal energy and, in some cases, to the tectonic and volcanic activity at the planetary surface; and the reactions that take place on the surface of planets, which gives rise to the composition and dynamics of their atmospheres. Terrestrial oceans are unique within the solar system; knowledge of their dynamics is essential if we are to understand the related problems, more common in a planetary context, of atmospheric dynamics and global climate.

Having placed the Earth in a global or planetary framework, we can identify the fundamental problems that can only, or most efficiently, be addressed by spacecraft in Earth orbit. In so doing we adopted a concept that now allows the Earth to be included in comparative studies with other planets.

The scientific topics in the first phase of the strategy include the dynamics of the solid earth, the geological structure and history of the continents, and the dynamics of the oceans. These three areas are of major importance in our understanding of the basic global processes that have shaped the Earth and will contribute to our ability to deal with such major societal issues as natural resources, natural hazards, and future climate.

These three major areas of study are linked through several scientific goals and objectives. The present surface of the solid earth is the product of many episodes of continental rifting, seafloor spreading, subduction and ocean closure, and continental collisions. The seafloor records the history of such processes only for the last 200 million years. Any earlier record of earth history and dynamics must be found in the mountains' belts, ancient shields and platforms, and the rifts and sutures of the continents. In a broad sense, the large-scale circulation of the ocean is also partly a product of the configuration of the ocean floor. As the seafloor subsides, as continents drift relative to one another, and as global spreading rates vary, ocean sea levels can change, new avenues can be opened for major bottom currents, and the bottom boundary condition will slowly evolve. An understanding of ocean circulation in the geologic past and in the future, and its influence on climate, is closely tied to an understanding of the changes in ocean bathymetry associated with plate dynamics.

In the area of solid-earth dynamics, the primary science objectives involve direct measurement of the present relative motions of the major tectonic plates. Because plate velocities provide a framework for much of our understanding of earthquakes, volcanism, and the origin of mountain belts, testing current concept by direct measurement is of utmost importance. The objectives also include measuring the deformation near plate boundaries and how it varies in time. Such measurements can greatly aid our understanding of mantle convection, the mechanism that drives plate motion.

In the area of continental geology, the primary objectives include mapping the distribution of surface rock types, their composition, and structure in a global and uniform fashion. This information is essential for deciphering the history of the Earth's crust and for characterizing the geologic setting of areas with potential resources.

For ocean dynamics, the primary science objectives are the determination of the surface boundary conditions for general circulation of the oceans on a global basis, including the sea-surface slope and the wind stress.

The committee regards solid-earth dynamics, continental geology, and ocean dynamics as areas of equal importance for a program of earth sciences from space, and therefore progress toward achieving the recommended objectives in each area over the next decade should be balanced.

The second phase of the strategy will be integrated with the first and will treat climate, atmospheric circulation, the Earth's water budget, and chemical cycles.

PLANETARY BIOLOGY

The Board identifies three objectives as fundamental to understanding Earth as a planet that harbors life. These are understanding: the origin and evolution of life; the cycles that sustain life; and the effects of life, both past and present, on the planet.

It was once believed that only a planet like Earth could provide the conditions under which the complex molecules that make up living systems could arise. We now know that complex carbon containing molecules can be found in such diverse places as interstellar gas and dust, comets, meteorites, and the atmospheres of the outer planets. The continuing study of these and related systems will play a key role in furthering our understanding of how the ingredients of living systems arise. For example, it now appears that the atmosphere of Titan, although very cold in comparison to that of Earth, resembles in many ways the chemistry of Earth's atmosphere before life appeared. Studies of the chemistry of Titan's atmosphere will help us understand the origins of life on Earth.

The next important step in the path toward life is the production of long-chain chemical polymers. Laboratory studies are needed to elucidate how such processes occur. Laboratory work is also needed to understand how the earliest polymers might have interacted to form primitive information-transfering and energy-generating systems. Eventually these primitive systems must have become cells--the minimal systems that can be recognized as being alive. In living systems enzymes are critical to this process. Laboratory studies are needed to understand how the earliest reproducing systems might have been formed without the aid of enzymes.

Many of the processes that arose with the advent of primitive life are still active today. These include the fundamental chemistry of the nucleic acids and proteins that form the basis of growth and reproduction in all living systems. Some two billion years ago life had one of its greatest impacts on the Earth and its surface--sufficient oxygen was released to dramatically alter the planet by creating the atmosphere that we know today, an atmosphere that could not persist in the absence of life. The life forms that contributed to this dramatic alteration can be studied through their fossil remains and through laboratory studies of the relationships among their still living descendants. Both kinds of effort are needed to understand the early stages of life on Earth and the extent to which the present-day appearance of the planet is dependent on the early development of life.

The advent of space technology has provided for the first time the capability to study life and its effects on a global scale. Since life is a global and not a regional or local phenomena, this is of fundamental importance.

The survival of life on Earth is dependent on the existence of an extensive interaction between a variety of systems. For example, we would like to know how the elimination of large sections of the tropical rain forests will affect the rest of life on Earth. Will the elimination of trees effect the amount of oxygen in the atmosphere? Will the increase in carbon dioxide produced by the burning of those trees affect the climate? It has been a concern that industrial gas and chemical emissions adversely affect populations of organisms in the oceans that form the basis of food chains for fish and other marine animals and also contribute to changes in atmospheric oxygen, carbon dioxide, and other gases. We cannot tell whether such effects are potentially harmful until we better understand the relationships between the microorganisms and their environment and the extent to which the living systems in the oceans and forests of the world determine the composition of the atmosphere. It is particularly important to identify and measure the contribution of the major species that convert sunlight into plant growth, for this is critical to understanding how close we are to taxing the capabilities of the system that supports life on Earth.

The atmosphere of Earth looks very different from the atmosphere of a planet without life. The most obvious quality is the large amount of free oxygen, but there are other important effects too; and the abundance of such gases as methane and ammonia are controlled biologically. If we are ever to understand the chemistry of the atmosphere and its stability, we will need know to the nature and extent of relevant biological processes. Satellite-based studies will make an important contribution to assessing the role of biological activity in maintaining the global balance of the atmosphere.

As an example of the role that life plays in shaping the surface of the planet, all organisms require mineral elements in order to grow and reproduce; other elements are toxic and retard or prevent growth. This means that rates at which elements move in and out of solid states are critical for biological survival. But biological processes themselves affect the chemistry of minerals, particularly in sediments and the oceans.

In order to understand the balance between these processes and to discover if it is changing in any way, it will be necessary to moniter the processes remotely. One way in which this can be done is by surveying large ecosystems such as coral reefs where carbon dioxide is being removed from the atmosphere and converted into limestone.

Since life is a global phenomenon it is not surprising that it takes global resources to understand it. Global biological studies require an understanding of satellite data that must be based on a close familiarity with the conditions that satellites observe only remotely. On the other hand, scientists who understand the way space techniques can be used can make them available to those in need of information to solve local problems. Such an interaction of global and local studies can provide great benefits for those attempting to understand the conditions critically important for human survival. Since many studies of fundamental importance to global research require a magnitude of effort involving scientists from a variety of disciplines and involve data gathering and analysis on a scale that exceeds the capabilities of an individual scientist, or even an entire university department, a coordinated international program would be a natural home for such studies.

SPACE BIOLOGY AND MEDICINE

Space exploration has given two distinct challenges, and opportunities, to the biologist. One could anticipate that weightlessness would subject an astronaut to unique physiological stresses. This has, in fact, proven to be the case. This unique perturbation to our system has provided us with many questions and, to date, a few answers. The fundamental and general nature of these questions has made them relevant to all animals and in several instances to plants.

At the same time that we were focusing our interests on fundamental principles of physiology, we were beginning to see our planet as a single entity. The Earth is unique among planets--unique in water content, unique in gaseous composition, unique in climate, unique in geology--because for over three billion years its elements have been cycling through living cells. We realize that we must understand global ecology in order to understand the basic characteristics of our planet. Inevitably some of the instrumentation and concepts used to study global ecology complement those used to understand our basic physiology.

The Space Science Board's Committee on Space Biology and Medicine considered five aspects of human physiology that are especially critical in spaceflight--Renal and Electrolyte Physiology, Cardiovascular Research, Endocrinology, Vestibular Research, and Genetics and Developmental Biology.

For reasons, still not understood, an astronaut loses several liters of fluid from his legs and passes several liters of urine during the first few hours of weightlessness. The eventual understanding of this fluid balance will not only permit extended spaceflights but contribute to an understanding of the physiologies of other people subject to unique stress--bedridden patients, divers, etc.

The heart functions satisfactorily at zero-g, even though fluid has shifted from the legs to the upper body. When an astronaut returns to the stress of normal gravity he/she faces several days of adaptation before tolerating a normal level of activity. We are trying to understand how increased, and decreased, demands on the heart affect short-term responses such as pulse and stroke volume as well as long-term acclimatizations such as changed muscle mass.

Progressive lose of bone is a major hazard of prolonged spaceflight and of prolonged immobilization. We do not understand the basic cellular and molecular mechanisms of bone deposition and resorption. Whether bones are responding directly to weightlessness or to altered concentrations of parathyroid hormone or of calcitonin has yet to be determined.

The Spacelab astronauts experienced motion sickness whose characteristics and causes seem similar to those of sea sickness and of car sickness. The integration of different sorts of sensory input, particularly from the vestibular system, is somehow degraded. One can select individuals who are less susceptible to motion sickness and one can find drugs that reduce the effects of motion sickness. However, in order to reduce its occurrance and minimize its impact we must understand the basic principles of sensory input and integration.

When a fertilized egg or the cells of an early embryo divide, their daughter cells, though carrying the same DNA, are destined to develop into different tissues. It has long been suspected that gravity is a critical factor in determining the destines of various cells and their progeny. A gravity-free environment allows us to evaluate the mechanisms underlying one of the most fundamental characteristics of plants and animals, their development from a unicellular to a multicellular organism.

The initial motivation for much of this research was a concern for the welfare and performance of the astronauts. The concepts and techniques have benefited from and contributed to our understanding of basic biology.

The following information compiled by the American Astronomical Society are examples of how decreasing NASA research budgets have affected high-energy astrophysics groups at five universities.

NASA FUNDING FOR HIGH ENERGY ASTROPHYSICS AT UNIVERSITIES

X-Ray Astronomy at MIT

Research in X-Ray astronomy at MIT is carried out by several groups of faculty, post-doctoral scientists, technicians and students. Their work, supported primarily by NASA grants and contracts, has comprised about one-half of the space science work at MIT's Center for Space Research. It has included several satellite projects that have had a major impact on the development of X-Ray astronomy. The lack of any satellite for X-Ray astronomy now and for many years to come coupled with the steep decline in support for analysis of data from previous X-Ray projects has been very damaging to this program as outlined in the table below. Much of the competence and experience built up over many years is being lost through lay-offs of research staff, graduate student training is being sharply curtailed, and needed replacement and upgrading of laboratory equipment cannot be accomplished.

	1980	1981	1982	1983(projected)
Funding	$2.69M	$2.47M	$1.99M	$1.30M
Inflation Factor	1.00	0.88	0.82	0.75 (assume 8%)
Funding (1980 $$)	$2.69M	$2.17M	$1.63M	$0.98M

High Energy Astronomy at the University of Wisconsin

Wisconsin relies on a number of small grants rather than one large contract. The grants have held constant in dollars since 1980 effectively cutting the buying power by 1/4. The group has reacted to this cut by giving high priority to salaries thus protecting the expertise built up over the years. They will not be able to continue this any longer, but without the experienced staff they will have no chance to compete for future space projects.

The group's scientific activities have been reduced to refurbishing and re-flying previously built rocket payloads. It has not been possible to develop new payloads or even to buy new laboratory and test equipment in the past few years. This year they have started to lose their technical help. They can continue to hold the group together in this mode for another year, but then this successful and experienced group will dwindle away.

Space Astronomy at the University of Chicago

At the University of Chicago five tenured professors (two theoreticians and three experimentalists) have designed and built instrument payloads for 30 space missions in the past twenty-five years. They have done all the work in their group with great success and at a very reasonable cost. Their budgets have been declining rapidly which, when combined with inflation, produces serious effects. They are starting to cut experienced technical people from their staff. Postdoctoral positions are no longer available to graduates from other universities, instead they are used for the very best local students. As with the other groups the equipment is aging, some of it dating from 1960. No funds for equipment replacement are available.

	1980	1981	1982	1983	
Funding	$4.32M	$3.76M	$2.76M	($2.1)	Uncertain!
Funding(1980 $$)	4.32M	3.31M	2.26M	(1.6)	

In this group the involvement with students is large. There are normally 5-7 Ph.D. students, plus several less advanced students. The group introduces many students to science and high technologhy experimentation by hiring undergraduates to work on space projects. This involvement will have to be curtailed starting next year.

The most insidious effect of tight budgets is the delay in the launch of spacecraft. The Chicago group has experiments on Spacelab 2 and on the European part of the ISPM. Both have suffered two year delays in launch -- after the instruments were developed. The equipment is being mothballed until use, but the experienced staff who will be needed to operate the instruments in flight are not being supported during this time. If the space physics laboratory had other projects, or other strong NASA support, they could weather this hiatus, but such is not the case. The problem is serious. The group has a commitment to have competent people available to operate the equipment when it flies. The solution to this problem will be difficult.

Space Astrophysics at Columbia University

The group at Columbia has been building an instrument to fly on the Space Shuttle and has continuing support to fly rocket payload instruments. In both cases there is not enough money to do an adequate job. Postdoctoral jobs which have averaged 1-1/2 positions during the past few years have been eliminated. There is no money to replace aging equipment. For example they depend upon eight year old magnetic tape drives which have become very unreliable.

In the budget figures below the current dollar increase in 1982 marks the final completion of the shuttle instrument. The precipitous drop projected in 1983 will be very serious.

	1981	1982	1983(projected)
Funding	$0.80M	$0.86M	$0.62M
Funding (1980 $$)	0.70M	0.70M	0.46M

The Columbia group, like the others, is deeply involved with students. The experience with space X-Ray astronomy provides excellent training in science and high technology. Their most recent Ph.D. student has taken a job with a medical technology firm -- working on sensitive medical X-Ray detectors which allow lower doses of X-Rays and also provide a better image of soft tissues of the body. The previous student went to the Princeton Plasma Physics Lab to use the plasma diagnostic capability of X-Ray spectroscopy to measure the characteristics of the fusion plasma in the Tokomak -- a situation which is identical to astronomical measurements of naturally occurring plasmas.

High Energy Astrophysics at the Harvard - Smithsonian Center for Astrophysics

The Center for Astrophysics has a major responsibility for archiving and analyzing the data from HEAO-2. They also run the guest investigator program for the use of this data. Their aggregate funding shows the same downward trend as the other groups listed above.

	1980	1981	1982	1983(projected)
Funding	$5.0M	$5.5M	$4.7M	$3.9M
Funding (1980 $$)	5.0M	4.84M	3.85M	2.93M

The drop in 1983 indicates the lack of commitment by NASA to the continued analysis of the data already obtained by HEAO, but as yet, unanalyzed.

Leadership in this field is already passing to the Europeans and Japanese. By the time the U.S. will fly another X-Ray astronomy satellite much of the U.S. capability, so carefully nurtured during the past decade, will have been lost.

Note:
This discussion has been compiled on short notice by Dr. Peter B. Boyce, Executive Officer, American Astronomical Society. The figures were obtained over the phone and are are as accurate as possible under the circumstances. They are certainly accurate enough to outline the trends.

For further discussion or references to specific individuals you may call Dr. Boyce at 202-659-0134.

April 28, 1982

NATIONAL SCIENCE FOUNDATION

STATEMENT OF STEPHEN KAHNE, MEMBER, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Senator GARN. Next I would like to invite to the witness table Stephen Kahne, member, Institute of Electrical and Electronics Engineers.

Mr. KAHNE. Good morning, Mr. Chairman. My pleasure is to represent the Institute of Electrical and Electronics Engineers this morning. This is the world's largest professional technical society, with 220,000 members, 180,000 of them in the United States. I am a member of the board of directors and speak for that organization. I am also a professor at Case Western Reserve, and up until 6 months ago served as engineering director at the National Science Foundation. I have submitted my comments, which I would appreciate being included in the record.

Senator GARN. Your statement will be included in the record.

Mr. KAHNE. I am sort of on the cusp between the NSF and NASA. I will focus mostly on the NSF.

The IEEE has long recognized the need to increase the emphasis placed on funding for basic engineering research within the National Science Foundation. In the past, the United States has built great universities through a healthy combination of teaching, research, and public service. Since World War II, the Government has been funding a substantial portion of the basic research. Currently, it supports about 95 percent of all university basic research. NSF has played a key role in this research support, and currently contributes about 38 percent of all Federal support to university basic engineering research programs.

Traditionally, the NSF has focused principally on science, with engineering as a secondary role. NSF has recognized this and began to address this shortcoming in recent years through the establishment of the Engineering Directorate. Our concern is that the National Science Foundation Engineering Directorate still receives a disproportionately small share of the NSF budget, as only about 10 percent of that budget goes for engineering. To illustrate this point, I would draw some comparisons between NSF support for engineering and that for physics and chemistry. Our point here is not to imply that we feel physics and chemistry receive too much funding, but rather that engineering receives too little.

Currently, there are less than 11,000 university faculty members in both physics and chemistry. In engineering, this number is closer to 17,000. Incidentally, there are 2,000 positions vacant in engineering. Yet the combined NSF support for physics and chemistry is proposed to be almost $155 million, while the engineering portion is proposed to be funded at $99.7 million. Moreover, a disproportionate share of other NSF research funding supports the physical and chemical sciences, rather than engineering.

With regard to the allocation of this funding, the average engineering profession in the United States receives about $10,000 per year in research support, about $6,000 to $8,000 originating from the National Science Foundation. If you want to make assumptions about the overhead rate, for example, 50 percent overhead, something on the order of $4,000 per year is available from NSF for the support of research in engineering per faculty member. If all this support went to support graduate students, it would end up supporting about one-third of a graduate student per faculty member. However, only about 19 percent of this funding actually goes for graduate student support. Other funds are used for faculty, staff support, and other expenses.

In contrast, the average physics or chemistry professor receives about $16,000 in research support from the National Science Foundation, or between two and three times the average engineering faculty support. Yet these fields have not generally suffered from the vacancies in university faculty positions as has engineering. Although the IEEE was pleased to see the new focus on engineering in its new Directorate, we surely are disappointed that the imbalances in funding continue.

In conclusion, we would urge this committee to appropriate the full funding level authorized for the NSF Engineering Directorate for fiscal year 1983.

Let me make a couple comments about NASA, although I emphasize my personal expertise is in NSF.

We believe that the proposed cut in NASA would seriously impair NASA's ability to function. Therefore, we oppose this measure. On the other hand, the proposal by the Senate Commerce Committee to increase NASA's fiscal year 1983 budget by $409 million by charging the Department of Defense for the full cost of its military Shuttle missions, we believe, deserves your careful consideration.

We support the Senate Commerce Committee's decision to add money for the fifth Shuttle orbiter. We support the committee's addition of $20 million for physics and astronomy and $40 million for planetary exploration.

In recognition of the importance of aviation and communications to our economy, recently the Senate Commerce Committee added $64 million to the NASA fiscal year 1983 budget for aeronautics R&D and $20 million for communications satellite R&D, and we support these decisions.

Thank you very much.

Senator GARN. Thank you. You just stated that it deserves our careful consideration to see Defense pay their full share of the Shuttle mission. Does this mean the institute supports the proposal of the Senate Commerce Committee or you just want us to carefully consider it?

Mr. KAHNE. We support that proposal.

Senator GARN. Thank you very much. I have no further questions.

[The statement follows:]

STATEMENT OF DR. STEPHEN KAHNE, RESEARCH AND DEVELOPMENT COMMITTEE, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

I am speaking today on behalf of the Research and Development Committee of the Institute of Electrical and Electronics Engineers (IEEE). The Institute was founded in 1884 and it is the world's largest technical society with 220,000 members worldwide. The U.S. Activities Board represents the 180,000 IEEE members who reside in the United States.

First, I will present our views on the FY 1983 NSF budget. Then, I will discuss the NASA budget.

FY 1983 NSF BUDGET

The IEEE has long recognized the need to increase the emphasis placed on engineering research within the National Science Foundation. Modern society requires products, services and systems of the type developed, designed, operated and maintained by engineers and others in engineering related disciplines. Programs of high quality for engineers are a vital necessity in our technologically oriented world.

The IEEE recognizes that our system for the support of academic engineering research faces a combination of problems. These are seriously eroding the quality of a large fraction of the educational programs and limiting our ability to conduct graduate research with graduate students who are needed for the appropriate development of the nation's economy, defense and standard of living. There is a close relationship between the economic growth of a region and the availability of skilled technical manpower; high quality technical education is necessary to retain or attract employers in high technology fields.

In the past, the U.S. has built great universities through a healthy combination of teaching, research and public service. Since World War II, the government has been funding an increasing proportion of basic research, and currently supports about 95% of university basic research. NSF has played a key role in this research support, and currently contributes about 38% of all federal support to university engineering programs. The U.S. is unique in the world in the way it has coupled research with graduate education at the university. Thus, NSF funding for research has a major impact on the quality of America's academic research endeavor.

Engineering enrollments have approximately doubled during the past decade without a corresponding increase in either faculty or facilities. Large increases in student/faculty ratios, 2,000 faculty vacancies and inadequate laboratory facilities are symptomatic of the problems facing U.S. academic research and education. A decrease in the attractiveness and the quality of the university environment as perceived by the faculty and prospective graduate students compounds the problems that must be resolved to correct this situation.

The IEEE recognizes the real problems faced by the engineering academic community to be the quality of the research and education programs and the quality of the graduates of these programs.

Traditionally, the NSF has focused principally on science, with engineering as a secondary role. NSF has recognized and began to address this shortcoming in recent years through the establishment of the Engineering Directorate. Our concern is that the NSF Engineering Directorate still receives a disproportionately small share of the NSF budget, as only about 10% goes for engineering. To illustrate this point, I will draw some comparisons between NSF support for engineering and that for physics and chemistry. Our point here is not to imply that we feel physics and chemistry receive too much funding, but rather that engineering receives too little.

Currently, there are less than 11,000 university faculty members in both physics and chemistry. In engineering, this number is closer to 17,000. And yet the combined NSF support for physics and chemistry is proposed to be almost $155 million, while engineering is proposed to be funded at $99.7

million. Moreover, a disproportionate share of other NSF research funding supports the physical and chemical sciences, rather than engineering.

With regard to the allocation of this funding, the average engineering professor receives about $10,000 per year in research support; about $6,000 - $8,000 originating from NSF. If one assumes an overhead rate of 50%, about $4,000 is available for research per engineering faculty member. If 100% of this funding went to support graduate students, it would support about 1/3 graduate student per faculty member. However, only about 19% of this funding actually goes for graduate student support. Other funds are used for faculty, staff support, and other expenses.

In contrast, the average physics or chemistry professor receives about $16,000 in research support from the NSF, or between two and three times the average engineering faculty support. Yet these fields have not generally suffered from the vacancies in university faculty positions as has engineering. Although the IEEE was pleased to see the new focus on engineering in its new Directorate, we surely are disappointed that the imbalances in funding persist.

In conclusion, we would urge this Committee to appropriate the full funding level authorized for the NSF Engineering Directorate for FY 1983. Even at this level, much of the necessary upgrading of university research equipment will have to be deferred, and many commendable research proposals will not be funded. Funding at this level will barely enable university engineering curricula to hold its own against inflation. Appropriating any less than this amount would result in the further erosion of this nation's ability to produce the high quality engineering research and manpower on which our economic and military security are so dependent.

FY 1983 NASA BUDGET

We believe that NASA has played a key role in advancing our nation's science and technology, and that it should be encouraged to continue to do so in the future. This country was not built by those who waited and rested and wished to look behind them. This country was developed by those who moved forward, and so will space.

An agency such as NASA moves forward by the start of new programs--without this it will stagnate. We are dismayed at the continuing cutback in the scope of NASA's tasks, and the resultant problems that this has caused in the scientific and technical communities. Funding for NASA should not be viewed as just another line item in the federal budget, but rather as an investment in our nation's future. Our nation's aviation industry, which began with two brothers in a bicycle shop in Ohio, is today a $100 billion a year industry. Similarly, our space industry, which started out in a cabbage patch in Massachusetts, has already made a substantial contribution to our daily lives, and this contribution will continue to grow. With this potential in mind, it is in our best interest that funding for NASA be stabilized in the years ahead, and if possible, increased in selected areas to make up for lost ground and to insure our preeminence in space.

Thus, we believe that the $600 million cut in the NASA FY 1983 budget proposed by the Senate Budget Committee would seriously impair NASA's ability to function. Therefore, we oppose this measure. On the other hand, the proposal by the Senate Commerce Committee to increase NASA's FY 1983 budget by $409 million by charging the Department of Defense for the full cost of its military shuttle missions, we believe, deserves your careful consideration.

I would now like to briefly give you our view of where NASA is today and what we would like to see it do during the next decade. Then, I would like to discuss in more detail our major problem with the FY 1983 budget--the lack of adequate funding for communications satellite R & D.

OVERVIEW

We are delighted that the three orbital test flights of the space shuttle have been so successful, and are confident that the remaining test flight and the first operational flight later this year will be equally successful. The Fourth of July may be particularly spectacular if the last test flight proceeds as planned.

We believe that NASA should be allowed to develop the basic capabilities needed to expand our use of space and to reduce the cost of operating there. This will enable the United States to gradually increase the size of its operations in space in the years ahead. Thus, we support the Senate Commerce Committee's decision to add $90 million for a fifth shuttle orbiter. Furthermore, we also support the extension of the shuttle's capabilities by the development of a reusable orbital transfer vehicle and a space station, and we are glad to see that the planning for these capabilities is continuing.

NASA also plays a vital role in the development of our commercial use of space by doing the long-term, high risk R & D which private industry cannot afford to do. This is true not only in such budding industries as manufacturing various materials in space and civil land remote sensing, but also in the more mature industries of aviation and communications satellites. Quite simply, if NASA does not do this research, then it is not likely to be done in the U.S., and we will cease to be a leader in another major commercial area because the Europeans and the Japanese are willing, and indeed are now making, this investment.

Underlying our increased use of space is the need for knowledge about the solar system and the universe beyond. We thus support the continued exploration of space, in general, and particularly such projects as Galileo, the Venus Orbiting Imaging Radar (VOIR), and the Space Telescope. To date, much has been learned about the universe through NASA's efforts, but the major fruits of NASA's space science program remain to be harvested. One mission of an orbiting astronomical observatory operating in a new wavelength, like one flyby of Saturn, is barely sufficient to pose the next level of important questions which need to be answered. This exploration should continue into the 1990's. It would be sad indeed if we were to celebrate the 500th anniversary of Christopher Columbus' landing in the New World in 1992 without a continuation of our exploration of space.

Thus, we support the Senate Commerce Committee's addition of $20 million for physics and astronomy, and their addition of $40 million for planetary exploration.

COMMUNICATIONS SATELLITE R & D

One area that was conspicuously neglected in the FY 1983 NASA budget was the initial funding for a 30/20 GHz communications satellite flight demonstration. We believe the funding should be added by Congress for this purpose in order to assure continued U.S. preeminence in this important commercial area.

Starting with the Syncom series of spacecraft, which established the feasibility of using the geosynchronous orbit for communications. the U.S. has led this field for many years. NASA developed a significant in-house expertise, funded the development of new technology by several U.S. contractors, and played a leadership role in making this a uniquely U.S.-dominated field.

In late 1972, the Nixon Administration thought that the industry had matured to the point where it could support its own R & D needs and decided that NASA should not initiate any communications satellite flight program beyond the sixth applications technology satellite (ATS-6). As a result, the funding for such programs, which had ranged between $80 and $120 million per year, in 1981 dollars, over the period 1962-74, was sharply reduced to approximately $10 million per year. The reduced amount was just sufficient to allow operation of on-going experiments, low-level technology development, and limited system concept studies.

Europe and Japan were quick to fill the vacuum left by NASA's withdrawal from communications satellite R & D, as evidenced by their increased investment and rapid rise to leadership in several communications satellite technologies. Even more important is the fact that European and Japanese manufacturers are moving from the fabrication of components to the fabrication of subsystems and complete systems, and changing their roles from that of subcontractor to prime contractor.

By 1978, various committees, technical societies (including the IEEE), and government organizations proposed that NASA resume communications satellite R & D. In the process, more than 100 private and government entities, representing a wide range of interests in communications satellites, provided inputs to NASA's decisionmaking, and its planning for reentry into the development of communications satellite technology. Continued NASA support of 30/20 GHz technology development was endorsed by representatives of all of these groups and the 30/20 GHz program became the principal element in NASA's R & D effort in satellite communications. In October 1978, the Carter Administration indicated that U.S. leadership in communications satellite systems would be supported by NASA.

Last June, Western Union released a report which indicated the continued growth in the need for communications satellites in the future. It estimated that the worldwide communications satellite market would be $35 to $ 50 billion over the next 20 years. The U.S. market alone was estimated to be $16 to $20 billion during this time period.

Shortly after the report was issued, the House Subcommittee on Space Science and Applications heard testimony from a number of industry and government witnesses on the importance of NASA's 30/20 GHz program, and of the need to begin the flight demonstration program in the near future if we are to maintain our preeminence in this area.

Since then, the Reagan Administration has indicated its belief that private industry should do the long-term, high risk R & D in this area, and it has not supported the proposed 30/20 GHz flight demonstration. We believe that the Reagan Administration is wrong on this issue, and that this is a proper activity for NASA. Industry cannot afford to do high risk R & D necessary to maintain U.S. leadership due to:

1. The large investment required and the 8 to 10 year period before significant returns on that investment can be expected, and

2. The current high interest rates which reduce the incentive to invest in high risk areas.

We would also like to point out that the lack of government funding for long-term, high risk R & D that industry cannot afford to do is not limited just to communications satellites. Another example is the Reagan Administration's reduced support for NASA's aviation system technology program. OMB eventually hopes to phase this program out entirely. Once again, the Reagan Administration is relying upon industry to do the R & D necessary to maintain our leadership in another important commercial field, and once again industry witnesses testifying late last year before the House Subcommittee on Transportation, Aviation, and Materials indicated that they were unable to do so.

Once flourishing U.S. industries in consumer electronics, steel and shipbuilding are now largely lost to foreign competition. The automobile industry appears to be on the same slippery path. The communications and aviation industries are two increasingly rare examples of international U.S. leadership, now under challenge, which contribute importantly to the national economy, employment, and the balance of trade. In addition, they are an important part of the industrial and technological base needed for the military security of this country. We believe that NASA must contunue to do the high risk R & D in these areas in order to forestall further inroads from foreign competition.

The Senate Commerce Committee, in recognition of the importance of aviation and communications to our economy, recently added $64 million to the NASA FY 1983 budget for aeronautics R & D, and $20 million for communications satellite R & D We support these decisions.

STATEMENTS OF:

PATRICIA HENDEL, PRESIDENT, BOARD OF TRUSTEES, NEW ENGLAND INNOVATION GROUP

ROBERT A COX, VICE PRESIDENT, NATIONAL ALLIANCE FOR PUBLIC INNOVATION

Senator GARN. Next I would like to call Patricia Hendel and Robert Cox. Patricia Hendel is the president of the board of trustees and Mr. Cox is the vice president of the National Alliance for Public Innovation.

Ms. HENDEL. Good morning.

Last year on June 3, I had the privilege to appear before this subcommittee to oppose OMB's February 1981 embargo of NSF's intergovernmental program budget and to endorse the use of NSF funds to complete the formation of a user-driven national network of regional innovation groups. Today I am here to report on two matters. The first is the impact of the administration's decision to withdraw from technology transfer and utilization activities involving local and State governments. The seond is to urge this subcommittee to renew the July 1981 recommendation of the full Senate Appropriations Committee that $3 million be provided for NSF's intergovernmental program.

I am a former Connecticut State legislator and my extensive experience in elective office and public affairs tells me that the Congress was correct when it enacted the National Science and Technology Policy Act of 1976, as well as the Stevenson-Wydler Technology Innovation Act in 1980. I am also familiar with the public's frustration with government at all levels and their calls for a centralization and more effective management of our intergovernmental system of shared responsibilities. However, I question whether any of the public's wishes can be realized by the Federal Government's arbitrary withdrawal from successful technology utilization programs such as those managed by the New England Innovation Group and supported, in part, by NSF. In fact, such a decision seems to be in opposition to the administration's New Federalism objectives as well as inconsistent with sound public administration and private business practices. Our country needs more, rather than less, innovation, and I know of no other Federal program than NSF's intergovernmental program which permits local and State governments to make greater and more effective use of science and technology for their own needs than the objectives of a Federal agency. As a former State legislator, I am also concerned that the elimination of the intergovernmental program appears to be solely an executive branch decision with no record of a corresponding decision by any House or Senate committee responsible for NSF's authorization or appropriations. In fact, the record in the Congress in 1982 appears to be in opposition to the decision made by OMB.

This confusion at the Federal level is systematically destroying the accomplishments resulting from 10 years of NSF-supported applied research about the innovation process in the public sector. Even the program's failures are not viewed as the result of incompetence, dishonesty, or criminal fraud, but rather as the price any organization, public or private, must pay if it is to remain a dynamic force in our society.

Today the administration's New Federalism requires even greater public understanding of the need for experimentation and innovation in the delivery of public services, but without a continued Federal presence in these efforts, I question how quickly we will see the type of improvements we all seek.

Included with this statement for the record is a copy of the New England Innovation Group's latest "Profile of Origin, Objectives and Accomplishments." It is difficult to imagine how any of these projects would have been possible without NSF's continuing investment in the New England Innovation Group, which amounts to 1 cent per year for each resident of New England. This NSF venture capital continues to generate returns such as the Rhode Island Foundation's May 13 announcement about the formation of an energy conservation program for Rhode Island's nonprofit agencies. This decision by a private foundation is a direct result of NEIG's earlier, NSF-initiated, work with Federal labs and private industry to adapt existing technology to identify and correct excess heat loss problems in public buildings. Using this experience, NEIG has demonstrated to the satisfaction of the Foundation's trustees that the nonprofit sector can save at least $22 million in energy costs over the next 10 years—and that is in our Nation's smallest State. With new cuts proposed in Federal support for social, health, and human services, I imagine Rhode Island's nonprofit agencies will be delighted to discover that $2 million per year can be shifted from energy costs to program activities. It is difficult for me to understand why OMB considers this type of accomplishment a waste of Federal funds.

Another example of the type of services local governments are asking New England Innovation Group to provide involve reducing the costs of street lighting. In 1980, the electric utility industry in New England derived $87.8 million of its $4.8 billion in revenues from street lighting. This represents only 2 percent of the industry's total income, yet it has become an increasingly burdensome cost to New England's 1,600 local governments. Introducing innovative and cost-effective street lighting is not a priority of the electric utility industry and few local governments are equipped to analyze, organize, and implement a program involving such complicated issues as rates of return, PUC regulations, and life cycle costing. In the past, NEIG could utilize NSF funds to help local governments understand all the parameters involved, but now we must first secure the revenues before attacking the problem, but it does alter our style of operations which has proven so effective over the last 7 years. Attached also is correspondence from the Rhode Island League of Cities and Towns.

Finally, in my own State of Connecticut, the city of Norwalk has asked NEIG to transfer a district heating program it helped to develop for Lawrence, Mass., to Norwalk's needs and circumstances. Please understand, NEIG is not preparing just another report, but rather it will network its own capabilities with other experts in district heating system development from public and private organizations. If NEIG is successful, Norwalk will accelerate its implementation process and produce a state-of-the-art system which can then serve as a model for other cities. Incidentally, in Lawrence, Mass., NEIG's original investment of $10,000 in NSF funds has attracted an $8 million UDAG grant from HUD and private-sector participation which already totals more than $30 million.

These examples, plus the other profiled in the supporting NEIG publication, would not have happened without support from NSF's intergovernmental program. Unfortunately, we do not see our country's major business corporations leaping forward to replace the NSF funds eliminated by OMB in February 1981 and again in December. NEIG's efforts to privatize its technology utilization program has attracted private sector praise for our accomplishments, but a "We'll think about it" response to our requests for tax deductible contributions. Over 50 private companies and foundations have been identified as being potential supporters of NEIG and the other regional innovation groups. Included in this group are the following: Aetna Life and Casualty, Bendix Corp., McDonnell Douglas, New England Telephone, Phillip Morris, Clement Stone's Foundation, Textron, Weyerhauser Corp.

These privatization efforts are costly, time-consuming, and further complicated by the current state of the national economy.

True, the above problems can be looked on as major opportunities for change and experimentation. But I believe, as I testified last year, that it is unrealistic to believe either the private sector or local and State governments will risk innovation investments without the type of Federal participation made possible through NSF's intergovernmental program. If there are dissenting opinions to this view on the subcommittee, then I would really like to know what alternatives would be suggested. If you find yourself in agreement with our position, then we urge you to appropriate, with a floor, no less than $3 million for fiscal year 1983 for the National Science Foundation's intergovernmental program.

We thank you for your kind listening to our testimony.

Senator GARN. Thank you.

Mr. Cox, do you have any comments you wish to make?

Mr. COX. I think the only thing I have learned as director of an innovation group is the shift in policy away from Federal participation to private participation puts a different context on the regional approach. The regional innovation groups and some of the national networks that have been managed by public technology I think seem to be attacked for implementing Federal policy. But when you talk to a major corporation, they are interested in what is going to happen in the area. Therefore, Hartford, Conn., is delighted we are doing things there, but they are not as excited about what is going on in Caribou, Maine. What is going on in Caribou, Maine, is important, as well as where the major corporations are nested.

Senator GARN. What specific role do you see for NSF in support of innovation groups such as yours and when should such support be phased out?

Ms. HENDEL. There is a program for that and we really do see it phasing out. I think there should be some continued Federal presence, for a lot of reasons, and some of them Mr. Cox just explained; that there should be a Federal role in the sponsoring of innovative science and technology and its transfer. We believe there should be a phasing out of it. Our budget, which we have submitted, shows there has been a phasing out over the last 5 years. The schedule has been enhanced very much by the zeroing out of the intergovernmental budget, and we have tried to increase our efforts to raise private funding. What we are finding is that we are taking too much of our staff time, or our director's time, and of our other staff to begin to explore this fund raising. We have linked together with other innovation groups in the country an alliance to become somewhat more efficient, and we have been able to contact some of the counties mentioned in our report. We can phase out over time. We cannot be just left with the plug pulled. We can't keep our superior staff; we can't keep the people providing assistance to energy, retrofitting old buildings in New England, without some sustained accountable cash flow. That is the problem. We were told by some major national corporations located in New England that the kind of change that they can foresee in federalism and what have you is way down the road and that we may be a little ahead of the curve in being able to break this down into a regional basis. They give us a lot of lip service support for what we are doing, but feel we are ahead of it. I think the role of NSF and the Federal Government is to help ease that period so when the regions are able to take up the burden, they can do so.

Mr. Cox. I would like to add that the National Alliance for Public Innovation did develop last October and November a 5-year de-NSF funding pattern, and all we asked for was $5 million on a graduated reducing scale over 5 years. We estimated, based on our initial contact with private industry, that would attach as much as $40 million. What happened in December is that the Federal Government pulled the plug out of a funding program that we had shared with private industry and now there is no other source of support.

Senator GARN. I thank you both very much for your appearance today, and we will certainly take your testimony under consideration.

Ms. HENDEL. We appreciate that very much.

[The statement follows:]

STATEMENT OF PATRICIA T. HENDEL, PRESIDENT, BOARD OF TRUSTEES, NEW ENGLAND INNOVATION GROUP

On June 3, 1981 I had the privilege to appear before this Subcommittee to oppose OMB's February 1981 embargo of NSF's Intergovernmental Program budget and to endorse the use of NSF funds to complete the formation of a "user-driven" national network of regional innovation groups. Today I am here to report on two matters. The first is the impact of the Administration's decision to withdraw from technology transfer and utilization activities involving local and state governments. The second is to urge this Subcommittee to renew the July 1981 recommendation of the full Senate Appropriations Committee that $3 million be provided for NSF's Intergovernmental Program.

I am a former Connecticut State Legislator and my extensive experience in elective office and public affairs tells me that the Congress was correct when it enacted the National Science and Technology Policy Act of 1976 and the Stevenson-Wydler Technology Innovation Act in 1980. I am also familiar with the public's frustration with government at all levels and their calls for centralization and more effective management of our intergovernmental system of shared responsibilities. However, I question whether any of the public's wishes can be realized by the Federal government's arbitrary withdrawal from successful technology utilization program such as those managed by NEIG and supported -- in part -- by NSF. In fact, such a decision seems to be in opposition to the Administration's New Federalism objectives and inconsistent with sound public administration and private business practices. Our country needs more, rather than less, innovation and I know of no other Federal program than NSF's Intergovernmental Program which permits local and state governments to make greater and more effective use of science and technology for their own needs than the objectives of a federal agency. As a former state legislator, I am also concerned that the elimination of NSF's Intergovernmental Program appears to be solely an Executive Branch decision with no record of a corresponding decision by any House or Senate Committee responsible for NSF's authorization or appropriations. In fact, the record in the Congress in 1982 appears to be in opposition to the decision made by OMB.

This confusion at the Federal level is systematically destroying the accomplishments resulting from ten years of NSF supported applied research about the innovation process in the public sector. Even the Program's failures are not viewed as the result of incompetence, dishonesty, or criminal fraud but rather as the price any organization -- public or private -- must pay if it is to remain a dynamic force in our society. Today the Administration's New Federalism requires even greater public understanding of the need for experimentation and innovation in the delivery of public services, but without a continued Federal presence in these efforts, I question how quickly we will see the type of improvements we all seek.

Included with this statement is a copy of NEIG's latest Profile of Origin, Objectives and Accomplishments. It is difficult to imagine how any of these projects would have been possible without NSF's continuing investment in NEIG which amounts to one cent per year for each New England resident. This NSF "venture capital" continues to generate returns such as the Rhode Island Foundation's May 13 announcement about the formation of an energy conservation program for Rhode Island's non-profit agencies. This decision by a private foundation is a direct result of NEIG's earlier, NSF-initiated, work with federal labs and private industry to adapt existing technology to identify and correct excess heat loss problems in public buildings Using this experience, NEIG has demonstrated to the satisfaction of the Foundation's Trustees that the non-profit sector can save at least $22 million in energy costs over the next ten years -- and that is in our Nation's smallest state. With new cuts proposed in federal support for social, health and human services, I imagine Rhode Island's non-profit agencies will be delighted to discover that $2 million per year can be shifted from energy costs to program activities. It is difficult for me to understand why OMB considers this type of accomplishment a waste of federal funds.

Another example of the type of services local governments are asking NEIG to provide involve reducing the costs of street lighting. In 1980 the electric utility industry in New England derived $87.8 million of its $4.8 billion in revenues from street lighting. Although this represents only 2% of the industry's total income, it has become an increasingly burdensome cost to New England's 1600 local governments. Introducing innovative and cost effective street lighting is not a priority of the electric utility industry and few local governments are equipped to analyze, organize and implement a program involving such complicated issues as rates of return, PUC regulations and life cycle costing. In the past NEIG could utilize NSF funds to help local governments understand all the parameters involved, but now we must first secure the revenues before attacking the problem, but it does alter NEIG's style of operations which has proven so effective over the last seven years. (See attached correspondence from Rhode Island League of Cities & Towns).

Finally, in my own State of Connecticut, the City of Norwalk has asked NEIG to "transfer" a district heating program it helped to develop for Lawrence, Massachusetts, to Norwalk's needs and circumstances. Please understand, NEIG is not preparing just another report, but rather it will "network" its own capabilities with other experts in district heating system development from public and private organizations. If NEIG is successful, Norwalk will accelerate its implementation process and produce a "state-of-the-art" system which can then serve as a model for other cities. Incidentally, in Lawrence, NEIG's original investment of $10,000 in NSF funds has attracted an $8 million UDAG grant from HUD and private sector participation which already totals more than $30 million.

These examples, plus the others profiled in the supporting NEIG publication, would not have happened without support from NSF's Intergovernmental Program. Unfortunately, we do not see our country's major business corporations leaping forward to replace the NSF funds eliminated by OMB in February 1981 and again in December. NEIG's efforts to "privatize" its technology utilization program has attracted private sector praise for our accomplishments, but a "we'll think about it" response to our requests for tax-deductible contributions. Over 50 private companies and foundations have been identified as being supporters of NEIG and the other regional innovation groups. Included in this group are the following:

Aetna Life and Casualty
Bendix Corporation
McDonald Douglas
New England Telephone

Phillip Morris
Clement Stone's Foundation
Textron
Weyerhauser Corporation

These "privatization" efforts are costly, time consuming and further complicated by the current state of the national economy.

True, the above problems can be looked on as major opportunities for change and experimentation, but I believe -- as I testified last year -- that it is unrealistic to believe either the private sector or local and state governments will risk innovation investments without the type of federal participation made possible through NSF's Intergovernmental Program. If there are dissenting opinions to this view on the Subcommittee, then I would like to know what alternatives would be suggested. If the Subcommittee finds itself in agreement with my position, then I urge you to appropriate -- with a floor -- no less than $3 million for FY 1983 for NSF's Intergovernmental Program.

LETTER FROM KENNETH F. PAYNE, EXECUTIVE DIRECTOR, RHODE ISLAND LEAGUE OF CITIES AND TOWNS

May 21, 1982

Mr. Robert A. Cox, Director
New England Innovation Group
128 North Main Street
Providence, RI 02903

Dear Bob:

Mr. John Kenny, the League's attorney in street lighting rate cases informed me this morning that the R. I. Public Utilities Commission handed down, late yesterday, an extremely favorable decision in the Blackstone Valley Electric Company rate case. Among the most important, and certainly the furthest reaching, aspect of the decision was to order the company to study "unbundling" street lighting rates and to participate in a committee studying alternative forms of ownership of street lights. Bundled rates have served as major barrier to introducing more advanced street lighting technologies.

The New England Innovation Group's qualifying the various technologies offered by street lighting vendors and exposing the League to advances in street lighting ownership outside the State were a significant contribution to the League's effort. The information NEIG has developed and the resources it has identified will be exceedingly useful in the deliberations which will take place in the Public Utilities Commission special committee on street lighting.

While the League now has the capacity to successfully intervene in street lighting rate cases it does not have a capacity to readily go outside the State to identify advances which are being made and to qualify technologies which are being developed. NEIG's capacity to do this is extremely valuable.

As you know, the Rhode Island League first became involved in street lighting rate cases when NEIG supported a technology agent on the League's staff. There was risk associated with venturing into a new area. Now of course the League has fully assumed responsibility undertaking inventions. NEIG's current role of gratifying technology and identifying where innovation has occurred is important to further advances.

Thank you for all the assistance you have provided.

Sincerely,

Kenneth F. Payne
Executive Director

PROFILE OF ORIGIN, OBJECTIVES, AND ACCOMPLISHMENTS

PRESIDENT'S REPORT

The New England Innovation Group is a six-state intergovernmental science and public technology program initiated in September 1975 in conjunction with the Rhode Island League of Cities and Towns, the U.S. Department of Commerce, the Naval Underwater Systems Center and the National Science Foundation.

In NEIG's formative stages it was principally supported by the National Science Foundation until June 1979 when it was incorporated as a public non-profit corporation. Since incorporation, NEIG's institutional base has grown increasingly diversified allowing it to remain a "free agent" in offering assistance to local and state governments. Synonymous with this, an organizational structure has emerged that seeks to insure that technology and innovation will continue to be offered to local governments throughout the United States even when unforeseen factors, such as reduced financial support from the federal government and unfavorable economic conditions dampen interest in innovation. In response to these forces, the National Alliance for Public Innovation, Inc. has emerged as a national non-profit corporation of regional innovation groups to assist state and local governments in utilizing the tremendous technological expertise of the private sector and other research and development institutions. NEIG, as a charter member of the Alliance will use this national network to help local and state governments solve problems, reduce costs and improve services. NEIG has focused its technology utilization activities in the following areas of need: (1) energy management; (2) economic/community development; (3) communication and information exchange/networking; and (4) policy management assistance. Within these areas of need, NEIG has provided the following types of technology utilization services throughout the six-state region of 12 million people.

ENERGY MANAGEMENT

- Information about energy efficient street lighting technologies and the identification of solutions to the high cost of street lighting.
- Field testing the effectiveness of energy management technical assistance methods: short courses, peer-to-peer exchange, and on-site technical assistance.
- Development of a comprehensive energy management program for non-profit agencies in Rhode Island.
- Determine the feasibility of alternate energy sources such as district heating as a means of improving the economic viability of an older industrial city -- Lawrence, Massachusetts.
- Develop low-cost methodology for determining the feasibility of reactivating several hydro-electric sites in Fitchburg, Massachusetts.
- Conduct one-day Energy Management Forums for New England educational administrators.
- Provide technical assistance to nine rural towns in Rhode Island seeking to identify, evaluate and implement energy conservation and alternate energy projects.
- Perform building energy management studies of over 20 schools, hospitals, and other buildings eligible to qualify them for funding under Title III of the National Energy Conservation Policy Act of 1978.
- Conduct applied research program to determine the technical and cost-effectiveness of infrared thermography as a quality control technique for insulation and other energy conservation measures.

ECONOMIC DEVELOPMENT

- Develop an action-oriented Economic Development/Energy Plan for the City of Lawrence, Massachusetts.
- Develop innovative financing strategies for implementating energy conservation projects in cities and towns.

- Define economically feasible and environmentally acceptable solutions to the treatment of hazardous wastes created by electroplating processes in Rhode Island's jewelry industry.
- Provide technical assistance to help small businesses reduce energy consumption.
- Provide guidance to public officials in revitalizing Stonington, Connecticut's, fishing industry.

COMMUNICATION AND INFORMATION EXCHANGE/NETWORKING

- Establish NEIG regional offices in Berlin, New Hampshire, and Boston, Massachusetts, to facilitate the networking of public officials with technology resources.
- Assist NSF to consolidate its various public technology demonstrations into a functioning national network -- the National Alliance for Public Innovation.
- Create institutional arrangements with academic institutions,such as Brown University, Wesleyan University, University of Rhode Island, University of Massachusetts and Franklin Pierce Energy Law Institute.
- Assist in organizing the first Congressionally sponsored technology exposition held in Hartford, Connecticut, in 1979.
- Utilize NEIG's own in-house information retrieval services in order to provide access to hundreds of information data bases.
- Assist cities and state governments in the cable TV franchising process to insure that cable TV systems respond to information and communication needs.
- Experiment with computer conferencing/electronic mail to cut travel costs and improve information exchange.

PUBLIC POLICY MANAGEMENT

- Utilize the Intergovernmental Personnel Act to place technology agents from federal labs and universities with local and state governments and regional public interest organizations.
- Evaluate the usefulness of Landsat technology for community and regional planning purposes.
- Cooperate with the State of Connecticut furnishing a "circuit rider" municipal finance advisor.
- Provide personnel for the federal labs to institute a volunteer service program.
- Develop a Municipal Energy Accounting Format.

FINANCIAL SUPPORT

Federal

Prior to 1979, NEIG was primarily funded by the National Science Foundation. Since 1979, NEIG has received grants and contracts from an increasingly diverse number of federal agencies including the Department of Energy, National Bureau of Standards, NASA, Department of Commerce, Community Services Administration and the Economic Development Administration.

Private Sector

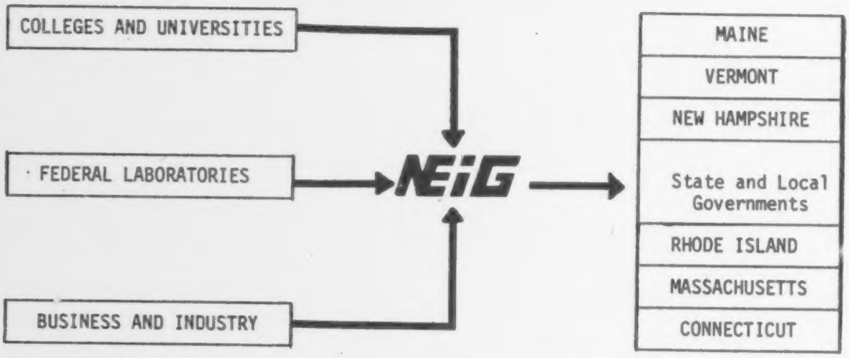
Over the last three years, each of NEIG's major science and technology program areas have attracted the interest and participation of private companies. This has set the stage for public-private cooperation in, for example, the commercialization of energy management technologies and techniques. In 1979 Dryvit Systems, Inc. of Warwick, Rhode Island, provided NEIG with funds to conduct energy management studies of schools in Westerly, Rhode Island, and Woodstock, Vermont. More recently, in 1981, the Rhode Island Foundation, a private philanthropic organization, provided monies to investigate the potential energy savings of non-profit agency buildings in the State of Rhode Island.

Non-Federal, Public Sector

Beginning with the Warwick, Rhode Island, School Department's participation with NEIG and Dow Chemical in the installation of an energy efficient roofing system, all public sector beneficiaries have provided non-cash support in all NEIG technology utilization projects. Included in this group of innovative municipalities are Portland, Maine; Berlin, New Hampshire; Woodstock, Vermont; Pawtucket, Barrington and Westerly, Rhode Island; Franklin County, Massachusetts; Lawrence and Fitchburg, Massachusetts; and Middletown, Connecticut. State participation has come from Rhode Island's Economic Development Office, New Hampshire's House of Representatives, Massachusett's Office of Energy Resources, Connecticut's Office of Policy and Management, and Vermont's Agency of Development and Community Affairs.

This report summarizes the results of past accomplishments and outlines technology utilization projects currently underway or planned. NEIG's role as a non-profit organization serving the needs of local and state governments continues to evolve and expand its capabilities to respond to the ever-changing economic, social, and political needs of the region it seeks to serve.

INFORMATION LINKING



PURPOSES AND OBJECTIVES

NEIG's overarching objective since its inception has been to define and establish a functioning regional intergovernmental science and public technology program sensitive to the needs of local governments and the political and economic realities of New England. As Technology Brokers linking together people, institutions, and resources, NEIG has demonstrated through a variety of technology utilization projects, the contribution of underutilized science and technology to solving critical public problems. By sharing capacities and capabilities, a new partnership has been born between local, state, and federal governments and the public and private resources of the science and technology community.

Objectives

1. Assist local and state governments to systematically assess their operations, define their needs, and establish priorities.
2. Stimulate the interest of federal, educational and industrial science and technology resources in the needs of local and state governments.
3. Coordinate and disseminate user needs to appropriate public and private technological resources.
4. Assist the users in adapting or modifying scientific and technological knowledge to meet their needs.

5. Aggregate user requirements for achieving economy of scale and cost-benefit savings.

6. Encourage the commercialization of scientific and technical knowledge in a manner which will enhance both the economy of the region and the quality of life for its citizens.

7. Develop financing arrangements where capital is the barrier to innovation.

8. Expand local, state and federal cooperation in policy and development implementation.

NEIG's ORGANIZATIONAL STRUCTURE

National Alliance for Public Innovation - The National Alliance for Public Innovation is a 501(c)(3) organization that operates a national network of regional innovation groups. The regional groups, operating in New England, the Southeast, Great Lakes, Southwest and Northwest, encourage and assist local governments in using innovative technologies. NEIG's director serves on the National Alliance Board of Directors.

NEIG's Board of Trustees - Policy direction for NEIG comes from a Board of Trustees novel in its diversity. The Board is based on the premise that problem-solving opportunities can be catalyzed by convening politicians responsible for public decisions with scientists responsible for developing solutions to problems. NEIG's Board is (1) intergovernmental; (2) diversified representing the private sector, university and federal laboratory resources; and (3) public service oriented.

Officers

President: Mrs. Patricia T. Hendel, former State Legislator and active civic leader.

Vice President: Mr. William J. Jones, Senior Researcher and Consultant at MIT Energy Lab.

Secretary-Treasurer: Mr. Kenneth F. Payne, Executive Director, Rhode Island League of Cities and Towns

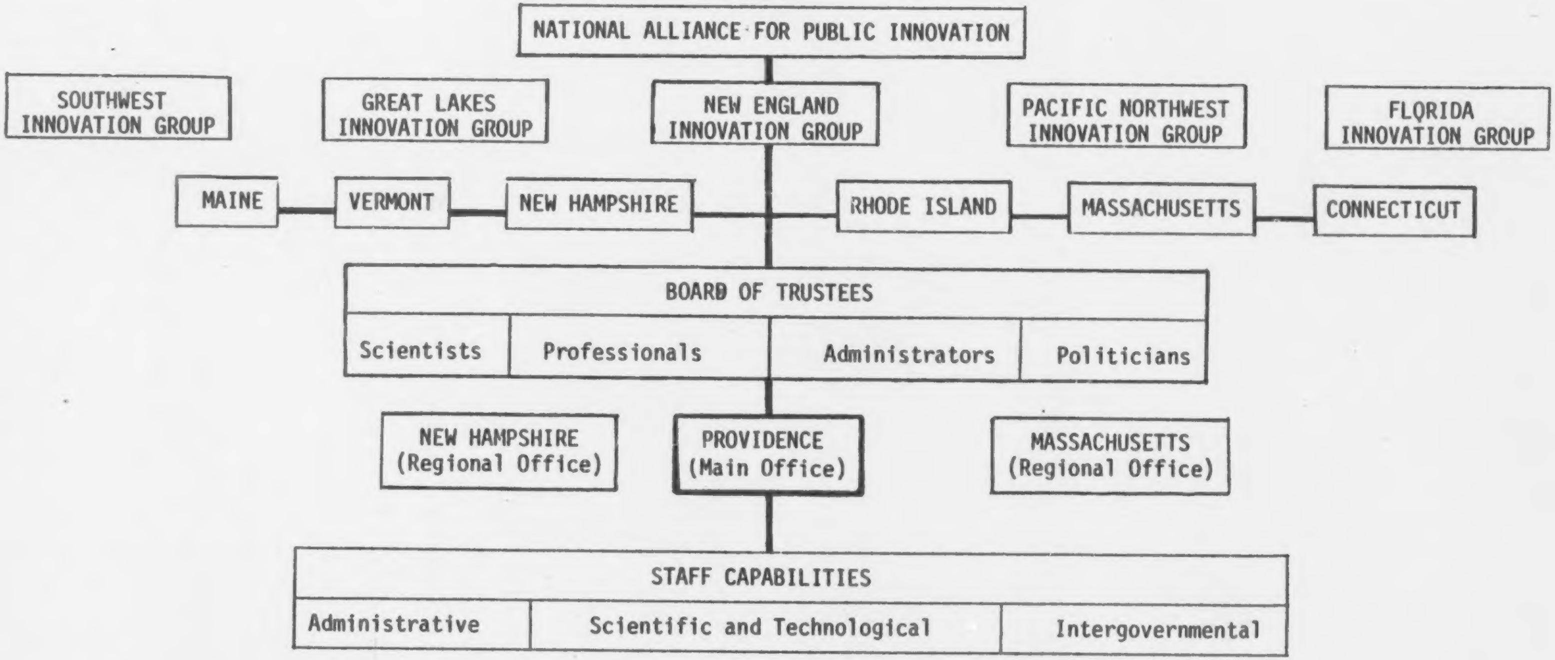
Director: Robert A. Cox

Offices:

- Providence: Central policy, program and administrative support personnel.
- New Hampshire: Resource Applications Manager and support personnel.
- Massachusetts: Manager of Massachusetts Regional Office and support personnel.
- NEIG exchanges professionals with the federal labs, municipal leagues, and academic institutions, and participates in internships and work study programs.

THE NEW ENGLAND INNOVATION GROUP...

A REGIONAL MODEL



NATIONAL ALLIANCE FOR PUBLIC INNOVATION

SOUTHWEST INNOVATION GROUP

GREAT LAKES INNOVATION GROUP

NEW ENGLAND INNOVATION GROUP

PACIFIC NORTHWEST INNOVATION GROUP

FLORIDA INNOVATION GROUP

MAINE

VERMONT

NEW HAMPSHIRE

RHODE ISLAND

MASSACHUSETTS

CONNECTICUT

BOARD OF TRUSTEES

Scientists

Professionals

Administrators

Politicians

NEW HAMPSHIRE (Regional Office)

PROVIDENCE (Main Office)

MASSACHUSETTS (Regional Office)

STAFF CAPABILITIES

Administrative

Scientific and Technological

Intergovernmental

PROGRAMS

Up until this point, most of the issues and projects that NEIG has undertaken are the result of efforts by the Director and staff anticipating issues requiring attention by the network of users (state and local officials and private and public agencies) in need of assistance. The Board of Trustees establishes the policies for the development and implementation of NEIG's technology utilization projects.

In all of its activities, NEIG has sought to involve itself in a manner which is harmonious with New England's political, social, and economic characteristics. NEIG has attempted to help cities and towns meet their needs as they perceive them, rather than forcing them to find problems to fit the scientists' solutions. When a project is undertaken, the Director places key staff people in a coordinating role. These staff people become the core of a network of advisors and resources originating in federal, academic, and private sectors and accessed to contribute to the solution of the designated problem.

NEIG opts for a solution to problems that:

- Involves PERSON-TO-PERSON COMMUNICATION between users and suppliers of technical resources.
- Considers ECONOMIC VIABILITY together with ENVIRONMENTAL ACCEPTABILITY.
- Leads to ACTION AND IMPLEMENTATION.
- Seeks PERMANENCE, not just quick visibility.

NEIG's activities are designed to strengthen and facilitate public management through communication and practical assistance.

Project accomplishments are summarized primarily into written reports for cost-effective dissemination through the National Alliance for Public Innovation and cooperating organizations. In addition, the results of NEIG's technology utilization projects have been included in:

- Magazine and news articles
- Media presentations
- Lectures/Seminars/Forums
- Congressional testimony
- Regional and national expositions and conferences

EXAMPLES OF NEIG's TECHNOLOGY UTILIZATION PROJECTS

ENERGY MANAGEMENT

1. Saving Schoolhouse Energy Project

   NEIG participated in the Saving Schoolhouse Energy Project sponsored by the Department of Energy and the American Association of School Administrators by conducting a number of applied research projects successfully, identifying and prioritizing excess heat loss problems in the region's school buildings.

2. Municipal Building Applied Research Project

   NEIG identified and prioritized heat loss in municipal buildings throughout the region including Berlin, New Hampshire; Woodstock, Vermont; and Westerly, Rhode Island. NEIG's applied research has included, underutilized technologies such as infrared thermography, insulating shades and computerized solar feasibility studies in an attempt to compile an overall strategy to solve building energy problems.

3. Title III

   NEIG contributed technical information used in developing Title III of the National Energy Conservation Policy Act of 1978. As a follow-up to NEIG's study, over 20 public buildings were awarded Title III energy conservation funds to implement NEIG's recommendations. Total monies awarded to these buildings as a result of NEIG's work has exceeded a quarter of a million dollars.

4. Demonstrating the Value of Quality Control Services

   NEIG supplied RISE (Rhode Islanders Saving Energy) with insulation quality control inspections using an infrared thermographic camera over a period of three consecutive winters. As a result, RISE opted to purchase a system to improve their energy audit services.

   NEIG also worked with several federal agencies to determine the cost-effectiveness of thermography as a way to ascertain the quality of retrofits in subsidized housing in ten pilot project cities across the country.

5. NEIG's Report to the New England Energy Congress

   In February 1979, at the request of the New England Energy Congress, U.S. Department of Commerce and U.S. Department of Energy, NEIG developed a strategy for ACHIEVING ENERGY CONSERVATION IN NEW ENGLAND that involved the creation of (1) an energy management assistance service organization; (2) the utilization of quality control techniques to evaluate retrofit measures and to track the rate of deterioration of weatherization improvements in public buildings; and (3) the development of a computer-assisted energy management accounting system for tracking energy consumption.

6. Energy Management Technical Assistance Project

   NEIG received a grant from the Department of Energy to test the effectiveness of three energy management technical assistance methods: one-day short courses, peer-to-peer exchange sessions, and on-site assistance to individual communities. The user identified areas of interest addressed by NEIG include: Comprehensive Community Energy Planning, Innovative Energy Project Financing, Street Lighting Conservation, Fleet/Vehicle Energy Management, Building Energy Management, Water/Waste Water Treatment Facility Energy Conservation and Low-Head Hydroelectric development.

7. Lawrence Phase II

   In Phase II of the Economic Development/Energy Plan for Lawrence, Massachusetts, NEIG has been designated to track the institutional, economic, and political forces influencing the decision-making process in Lawrence. NEIG will provide technical assistance in the implementation of the Phase I recommendations, such as a mini-district heating system.

8. NEIG/Rhode Island Foundation Energy Management Demonstration Program

   This demonstration program has displayed NEIG's capabilities in identifying building/energy problems within non-profit agencies in Rhode Island and identifying innovative methods of financing energy conservation measures which can correct these problems. NEIG's recommendations for the non-profit agencies have ranged from simple weatherization to the replacement of a primary heating system, and uncovered administrative as well as technical problems.

9. Nine Rural Rhode Island Towns Energy Project

   The Rhode Island League of Cities and Towns, NEIG and the University of Rhode Island, through an Area Planning Grant from FmHA, have been charged with completing comprehensive community energy conservation and management plans and implementation strategies for each of the following nine Rhode Island towns: Charlestown, Exeter, Foster, Hopkinton, New Shoreham, Richmond, Scituate and West Greenwich.

   NEIG's task is to identify, secure and manage technical expertise as requested by the participating towns with regard to energy initiatives involving energy conservation and the development of locally available energy resources.

ECONOMIC DEVELOPMENT

1. Jewelry Industry

NEIG launched an economic development program to assist the Jewelry Industry in identifying the extent of the industry's electroplating waste treatment problems, and to ascertain solutions to waste water pollution problems. NEIG produced three technical reports outlining environmentally acceptable solutions including: chemical solutions to eliminate pollutants, in-process modifications to reduce pollutants, and both individualized and centralized treatment and recovery to remove pollutants from the waste water.

2. Lawrence Phase I

The basic objective of this applied research project to create an Economic Development/Energy Plan for Lawrence, Massachusetts, was to assess and to prepare an action-oriented agenda for public/private implementation including:

- innovative financing mechanisms
- expanded outreach services
- organizational improvement within municipal government

3. Stonington Fisheries

NEIG supported, along with the UConn Marine Advisory Service and the Educational Development Center in Newton, Massachusetts, URI oceanography student's summer internship research on the potential economic development impact of harvesting underutilized species (e.g., whiting, dogfish, jonah crab) on the fishing at Stonington, Connecticut, the site of the sole commercial fishing fleet in the State of Connecticut.

Results indicated that the potential for positive economic impact through the harvest of these species was great and warranted further research and increased attention by the fishery.

COMMUNICATION AND INFORMATION EXCHANGE/NETWORKING

1. Satellite Communications and Cable TV

NEIG has assisted state and local governments in New England and nationally in the preparation of cable TV franchises and in the education of government officials and the public about cable TV's potential. NEIG assisted the Rhode Island Public Utilities Commission and the Rhode Island Community Television Access Committee to formulate cable TV rules and regulations for a statewide interconnecting telecommunications system. NEIG estimates the value of these services to the public sector at $10,000.

2. Information Retrieval

NEIG, with the assistance of the Naval Underwater Systems Center in Newport, Rhode Island, and New London, Connecticut, and other members of the Federal Laboratory Consortium, provides state and local governments with access to hundreds of information data bases. Quick and efficient access to information related to municipal and state problems helps to stop the "re-invention of the wheel" and can save cities thousands of dollars. NEIG has supported and encouraged public libraries to make use of these services in assisting their local municipalities solve problems.

3. Networking

NEIG has expanded its outreach network in a variety of ways. These have included technology agents, cooperative agreements, technology expositions, direct contracting, and working through existing organizations such as community colleges, regional planning agencies, and regional entities such as the New England Municipal Center. To improve outreach, NEIG has also supported regional program offices in Massachusetts and New Hampshire.

PUBLIC POLICY MANAGEMENT

1. Technology Agents

NEIG has supported seven technology agents in four New England states to assist in the area of public policy management. For example, an agent from a federal laboratory at the Connecticut Conference of Municipalities provided general technology transfer information to cities and towns, and an agent at the Rhode Island League of Cities and Towns worked on policy and regulatory issues related to solid waste management, hazardous waste disposal and street lighting.

NEIG's Technology Agent demonstrations have identified four styles of operation: (1) inquiry response and information dissemination; (2) problem aggregation; (3) policy orientation; and (4) capacity-building.

2. Landsat

NEIG received a grant from NASA in the fall of 1980 to determine the applicability of Landsat data to substate (county, municipal, RPA) planning and resource management activities. Working with the UMass Regional Planning and Landscape Architecture Department, NEIG conducted three user awareness workshops to increase the capability of using this complex tool, in Northampton and Boston, Massachusetts, and in Portland, Maine. NEIG was also responsible for forming a Landsat Substate Advisory Committee of representatives from each of the New England states. The Committee identified cost and reliability of the data, frequency of satellite coverage and regional weather characteristics, such as extensive cloud cover, as the major barriers to increased utilization of this technology.

3. Energy Management of Municipal Street Lighting

NEIG has offered municipalities throughout New England, and more specifically in the State of Rhode Island, technical assistance in the area of municipal street lighting.

NEIG has developed a resource guide that illustrates ways in which municipalities can combat rising energy-related street lighting costs. It has also brought technical experts in the field of street lighting into the region who have assisted in identifying regional issues and strategies to overcome these problems. NEIG's participation in the Rhode Island Governor's Community Energy Task Force has significantly contributed to identifying the reasons for and the solutions to the high cost of street lighting in Rhode Island.

4. Improving Local Government Financial Management

NEIG cost-sharing made it possible for the Connecticut State Office of Policy and Management to hire a technology agent to work with cities and towns to improve their financial management practices and procedures. During the second and third program years, NEIG served on an Advisory Board for the project. The project benefits identified included strengthening state technical assistance capabilities, improving local government performance, and developing a model for other state municipal technical assistance efforts.

5. Municipal Building Energy Management Accounting

NEIG received a contract from DOE in 1980 to develop a municipal building energy accounting format. NEIG's computerized information retrieval capability and network of resource organizations allowed it to identify existing accounting formats from which to learn and expand upon. The Connecticut Energy Office, CCM and faculty from Wesleyan University all worked on the development of this document which has received very favorable reaction from the locals who have seen it. It has become an integral element of NEIG's energy management program (i.e., its use in the Rhode Island Foundation project) and is going to be disseminated to all the region's municipalities by DOE in the next few months.

STATEMENT OF RUSSELL DYNES, EXECUTIVE DIRECTOR, AMERICAN SOCIOLOGICAL ASSOCIATION

Senator GARN. Next I would like to invite to the witness table Mr. Russell Dynes, executive director of the American Sociological Association, on behalf of the Consortium of Social Science Associations.

Mr. DYNES. Thank you, Mr. Chairman. I am pleased to be here to testify on the National Science Foundation appropriations. As you indicated, I am the executive officer of the American Sociological Association and I speak today on behalf of the Consortium of Social Science Associations, an organization made up of 26 scholarly groups, including my own association. The consortium represents about 150,000 social and behavioral scientists across the country.

As you know, the administration last year targeted the social and behavioral science programs of the National Science Foundation for especially severe budget cuts. The fiscal year 1982 budget for the Division of Social and Economic Sciences was scheduled for a 75 percent cut from the amount originally requested by the Foundation. In retrospect, there is general agreement that such suggested cuts were made in haste, without careful consideration. At the end of last year, the President's science adviser was quoted publicly as saying that the social and behavioral science budget cuts displayed poor judgment. Shortly thereafter, the Director of the Foundation testified before the House Subcommittee of Science, Research, and Technology that the social and behavioral science research funded by NSF was equal in quality to research funded in other fields. The National Science Board affirmed that the long-range interests of the Nation required adequate funding for social and behavioral science research. And the members of the National Academy of Sciences passed a resolution critical of the high selective cuts which had been made in the social science research budgets. Such cuts, then, could not be justified on the basis of new directions in national science policy. Consequently, last year the Foundation was able to restore $11 million to the fiscal year 1982 budget of the social and behavioral science programs.

However, in spite of such widespread acknowledgment of the importance of continued funding of the social and behavioral sciences and the actions taken last year to modify the consequences, there are still major negative effects. The budget request for the Division of Social and Economic Sciences for fiscal year 1983 was 43 percent lower than the Division's budget for fiscal year 1980. This comparison, however, does not take into account the effects of inflation, which has probably eaten away another 20 percent. And the behavioral science research programs, as well, were budgeted at a comparable level below their fiscal year 1980 level.

We are asking this subcommittee to restore funding for NSF's social and behavioral science programs to their fiscal year 1980 levels. The Senate authorizing committees have already acted to add $5 million to the social and behavioral sciences. This restoration, however, would still leave the social sciences far behind other divisions of NSF in being able to maintain sustained funding and provide the continuity of critical programs.

We ask for this restoration because, according to the Director of the Foundation, the social and behavioral science research programs fund good sciences; because, according the President's science adviser, these programs should not have been cut as they were; and because, importantly, these programs fund needed science. Given the state of our economy and the needs of the Nation, we cannot afford to curtail our investment in social and behavioral research.

Let me give you just a few examples of some of the uses of recent NSF-supported social science research.

Fortune magazine last year highlighted current industrial interest in productivity improvements through working smarter, that is, applying social science research to industrial management, worker-management relations, and industrial productivity. Roughly 30 percent of the research funded by NSF's Division of Social and Economic Science is directly or indirectly related to issues of productivity and capital formation.

A forthcoming report by the National Academy of Sciences points out that research in the social and behavioral sciences has provided the Foundation with numerous information technologies now held to be indispensable in both the public and private sectors. Examples are economic forecasting models, sample surveys, economic indicators, and standardized tests. Essential research in these areas has long been supported by the NSF research programs in the social and behavioral sciences.

Business Week devoted much of an article in its May 11, 1981, issue to a study of the economic effects of the U.S. patent system. The study has been of considerable interest to patent attorneys and business executives. It was supported by NSF research programs in the social and behavioral sciences.

Mr. Chairman, a restoration of the NSF social and behavioral science research budgets to their fiscal year 1980 level will allow the Foundation to maintain and develop key national data bases, to improve research methodologies and techniques, and to fund investigator-initiated projects that strengthen the foundations of our understanding of behavioral and social phenomena.

We are presently in the midst of an economic crisis, trying to cope by a major reorientation of national policy. If ever we needed to monitor our social and economic processes, the time is now. The amount of money provided for the social sciences in the NSF budget has always been small compared with support for other fields. The $5 million addition suggested by the Senate authorizing committees only provides a partial recovery at a time when continued support of critical programs is necessary to achieve those national goals. I would urge you to move the support back to the 1980 level. The discontinuities in research have already been great and the social costs will have much longer consequences.

Thank you for this opportunity to testify before you.

Senator Garn. Thank you, Mr. Dynes.

You have recommended that we provide funding for NSF's social and behavioral science program at the fiscal 1980 level. Assuming the total NSF budget is fixed at the requested level—that is, the $1.072 billion—where would you recommend we get the additional funds for social and behavioral sciences?

Mr. DYNES. I think if it is fixed, I think there probably could be some reallocation. I think the Foundation last year made some reallocations. They could probably do that again.

Senator GARN. Well, that is what I am trying to determine. Do you have some specific recommendations where those reallocations should be made?

Mr. DYNES. I think in certain types of things, certain types of research programs, it seems to me, you lose effect in funding. Certain types of equipment purchases probably can be delayed as serious consequences of that.

Senator GARN. Thank you very much. We appreciate your testimony this morning.

FEDERAL EMERGENCY MANAGEMENT AGENCY

U.S. FIRE ADMINISTRATION

STATEMENT OF JOHN A. GANNON, CHAIRMAN, JOINT COUNCIL OF NATIONAL FIRE SERVICE ORGANIZATIONS

ACCOMPANIED BY HAROLD SCHAITBERGER

Senator GARN. Mr. John A. Gannon, chairman of the Joint Council of National Fire Service Organizations. We would be happy to hear your testimony at this time, Mr. Gannon.

Mr. GANNON. Thank you, Mr. Chairman.

I would first like to extend the appreciation of the joint council and its constituent organizations for this opportunity to present our views to you concerning the Administration's proposed elimination of the U.S. Fire Administration.

I would also like to introduce to you the gentlemen accompaying me today, who are representatives and leaders of several of our Nation's fire service organizations and who make up the membership of the joint council. I have with me Mr. Schaitberger of the International Association of Fire Fighters; Mr. Smith of the National Fire Protection Association; and Mr. Ed McCormack of the International Society of Fire Service Investigators.

Mr. Chairman, the joint council was created to address what the Nation's fire service organizations felt was Federal inaction in playing any significant role in helping to reduce our Nation's unacceptably high rate of losses in life and property due to the ravages of fire. Mr. Lou Amabili, a member of the President's Commission on Fire Prevention and Control, helped to develop the Commission's report, "America Burning," which led Congress to take appropriate action and enact legislation which created the U.S. Fire Administration.

We feel that the Federal Government has and should continue to play a role in coordinating activities, in compiling statistical information, and in helping provide the type of research and development which is essential if American fire losses are to be significantly reduced, and which would otherwise be unavailable to our Nation's fire services and to this country's citizens.

Since 1974 we have seen a reduction of losses in life and property due to fire, and we believe this is partially due to the role the U.S. Fire Administration has played. We are, therefore, extremely dismayed and concerned to see that FEMA has failed to request, and the President's budget proposal for fiscal year 1983 has not provided, any funds for the U.S. Fire Administration.

I think it appropriate to bring to your attention the fact that the joint council and many of its member organizations played a significant and direct role in the establishment and approval of the President's Reorganization Plan No. 3 during the last administration, which created the Federal Emergency Management Agency and under whose jurisdiction the U.S. Fire Administration was placed.

It is also significant that during the discussions, negotiations, and agreements which were reached by the Nation's fire services and the Federal Government in order to solicit our support for the reorganizations, we were assured that the Federal focus on our Nation's fire problem would be protected and preserved through the U. S. Fire Administration. We were also assured that the USFA and its mission would remain an integral and independent part of the newly created agency and that the USFA would stand at a level equal to all other departments within FEMA.

Most importantly, we were assured that the U.S. Fire Administration would remain separate and apart from all othar FEMA programs and would not be dismantled and incorporated into other FEMA departments. It seems quite ironic that FEMA, which was created in no small part by the support of our organizations, is now attempting to eliminate and kill the agency that we hold as one of our highest priorities.

We also would draw your attention to the fact that since Congress has become aware of the administration's and FEMA's attempt to eliminate the USFA, it has begun to react in a positive way. The Congress is sending a message to the administration conveying its belief and desire that the Fire Administration not only be protected but that it should also be adequately funded.

For example, the House Committee on Science and Technology has recently reported out House Resolution 288, which clearly states the Congress' continued support and interest in the U.S. Fire Administration. Also, the Senate Commerce, Science, and Transportation Committee has adopted an amendment to its NASA authorization bill, introduced by Senator Cannon and supported by the committee's chairman, Senator Packwood, which not only conveys their support for the USFA but also provides that:

> The Director shall reserve not less than $20 million of funds appropriated to carry out the functions of FEMA as designated in Reorganization Plan No. 3 of 1978, to conduct the operations of the U.S. Fire Administration, the U.S. Fire Academy, and such other functions and responsibilities as are vested in the Director pursuant to the Federal Fire Prevention and Control Act of 1974.

Mr. Chairman, several of the fire service organizations, including my own International Association of Fire Fighters, have submitted statements to your distinguished subcommittee which provide a more detailed discussion of our specific concerns and express our support for the program of the USFA.

Therefore, in conclusion, I would simply request that your subcommittee appropriate sufficient funds—for example, the $20 million found in the Senate Commerce, Science, and Transportation Committee recommendations—specifically for the U.S. Fire Administration and its programs, in order to preserve the vital role that it plays in dealing with our Nation's fire problems. I would hope that this subcommittee and the full Appropriations Committee will not allow the administration to undermine congressional intent to establish and maintain a Federal fire program through the U.S. Fire Administration.

When Mr. Guiffrida was asked by a distinguished member of another committee of this body—Senator John Glenn of Ohio—why he was seeking to eliminate the U.S. Fire Administration, he responded that he was not eliminating the USFA, but was simply not asking for any funds. It was clear to Senator Glenn, as it is to the joint council, that this is an underhanded, yet obvious, attempt at usurping the powers of Congress through budgetary means.

Again, we thank you for this opportunity to present our views and we stand ready to answer any questions you may have.

Senator GARN. Thank you, Mr. Gannon.

What specific functions of the U.S. Fire Administration are most valuable to members of your organizations?

Mr. GANNON. One of our very high priorities is the U.S. Fire Academy. We also have a Project Fires that develops what we would like to think is a total protective envelope for protective clothing and breathing apparatuses for the firefighter and other areas along that line.

Senator GARN. Thank you very much.

I would like to say that I am tremendously impressed with all of the witnesses here this morning. Every single one of them stayed within their time. That is not something we are used to around here. As a result, we have actually finished the morning session about 15 minutes early. If my colleagues could learn from the witnesses here this morning, the Senate would be a much nicer place to work.

We appreciate your testimony very much and thank you all for coming.

SUBCOMMITTEE RECESS

The subcommittee will stand in recess until 1:30, when we will continue to hear public witnesses.

[Whereupon, at 11:30 a.m., the subcommittee was recessed to reconvene at 1:30 p.m. the same day.]

(AFTERNOON SESSION, 1:30 P.M., MONDAY, MAY 24, 1982)

NONDEPARTMENTAL WITNESSES

NATIONAL SCIENCE FOUNDATION

STATEMENT OF SHELDON HACKNEY, PRESIDENT, UNIVERSITY OF PENNSYLVANIA, ON BEHALF OF THE ASSOCIATION OF AMERICAN UNIVERSITIES AND OTHERS

Senator GARN. The subcommittee will come to order.

The first on the list in this afternoon's session is Mr. Sheldon Hackney, president of the University of Pennsylvania, on behalf of the Association of American Universities and others. If you would like to proceed.

Mr. Hackney. Thank you very much, Senator.

I am Sheldon Hackney, president of the University of Pennsylvania, and I thank you for this opportunity to come before you to present the views on the Nation's science and engineering research and education needs as they are addressed in the fiscal year 1983 budget request of the National Science Foundation.

My statement is presented on behalf of the following higher education associations: The American Council on Education, the Association of American Universities, the Association of Graduate Schools, the Council of Graduate Schools in the United States, and the National Association of State Universities and Land-Grant Colleges.

I don't want to repeat everything that is in the testimony that has been submitted for the record, but I would like to emphasize several of the key points made in this testimony.

Beginning with the truism that is actually that basic research in science and engineering is an essential element for technological progress. The importance of the National Science Foundation is that it alone among the Federal funding agencies has as its primary goal the support of such basic research. Alone, NSF provides a major source of funding for the kind of long-range programs that have the greatest potential for making significant advances and knowledge over the long haul. In so doing, it serves as a catalyst for attracting complimentary support from both industry and more mission-oriented Government agencies for projects whose practical applications appear feasible.

The National Science Foundation provides much of the funding for basic research performed at American universities. Because of the long-range nature of most of these programs, efficient utilization of NSF funding requires that be sustained in a stable position. Unfortunately, what we have seen in the past several years is an erosion of the Foundation's programs which, if allowed to continue, will seriously threaten our Nation's predominate position in science and technology.

Dr. David White at the University of Pennsylvania, the director of the lab for research on the structure of matter, a program which has been supported by NSF puts the matter this way:

> Funding to our laboratory—that is, to the laboratory on research on the structure of matter—has in constant dollars been decreasing, which has not only diminished research in graduate student support but has also affected our ability to acquire the necessary equipment and technical support for our central facilities.

Equally important is the onset of the stagnation on the program because of its lack of flexibility and its inability to respond to new and exciting opportunities in materials research. Decreased constant dollar funding is also slowly reducing the pool of trained individuals in an area which is turning out to be vital to the local economy at a time when foreign competition is able to assimilate new discoveries in materials more rapidly than in this country.

Although the problem is by no means severe at this point, it will become just that if NSF appropriations are not increased.

Furthermore, these programs take years to evolve and once a decline sets in, it is difficult to reverse the process.

The situation of this lab at Pennsylvania is typical for NSF-supported programs. In the period 1981–83, most of these programs will increase at less than an annual rate of 7 percent, well below the amount needed to maintain present research levels and clearly inadequate for exploration of exciting new areas of research.

The Foundation has slated several programs, particularly those in the social sciences, for reductions of 20 percent or more and, in addition, plans selective reductions in the numbers of scientists funded and graduate students supported.

Repercussion of such cuts will be felt not only in the program themselves, but also in the related programs funded by other agencies. The Defense Science Board has already expressed concern over the fate of areas of the Department of Defense interest should NSF budgets fail to maintain appropriate funding levels.

I would like to speak about two major areas of concern for the future well being for the basic research enterprise of this country. One is the continued decline in the number of American students choosing to pursue graduate programs in science and engineering, a decline which appears to be most marked among the very best undergraduates. Through its graduate fellowship program, NSF has fostered excellence in graduate science and engineering education. This program has had considerable success in attracting high-quality students into these areas but, regretably, has declined in science in recent years to only 450 awards per year.

In addition, the stipend provided to the student and the educational allowance provided the institution fall considerably short, both in meeting the competition in the marketplace and meeting the needs of the students and universities.

The second area of concern is the growing obsolescence of equipment and facilities in colleges and university laboratories. This point is illustrated by the effects, even in our top-ranked research universities; the available instrumentation is double the median age that is used in leading industrial research facilities.

Summing up, basic research in American universities is threatened with the loss of superior position. Erosion and support of the NSF program is a major threat. It is imperative that such support be provided on a stable basis to allow for the orderly development of long-term projects and that major investments be made both in attracting high quality students to graduate science and engineering programs and in upgrading research laboratory facilities.

Accordingly, we urge the committee to support the actions of both the Senate Committee on Labor and Human Resources and the Senate Commerce Committee in recommending an NSF appropriation at a level equal to the final Senate authorization bill which is slightly in excess of the administration's request. We specifically ask for support of the administration's request for the graduate fellowship program for fiscal year 1983 and we suggest that in its report the committee urge the Foundation to further strengthen the program in its fiscal year 1984 budget request.

Thank you very much for this opportunity.

Senator GARN. Thank you for your willingness to come and present your testimony today. However, with so many witnesses we can only give each witness a few minutes to present their testimony.

Obviously, some tradeoffs are inevitable and we might have to recommend reducing NSF research and grant programs to provide the additional funds you are recommending for science education.

Would you support that shift in priorities?

Mr. HACKNEY. I would hate to have to make a choice between these two vital aspects of the program. If the choice had to be made, I would really hate to see the education part of the budget boosted at the expense of the research side which I consider slightly more important to a university such as us and there are educational byproducts of that effort.

Senator GARN. I understand your sentiments. You have to make choices. Unfortunately, we have to make choices all of the time. Just in the subcommittee we have about $60 billion worth of choices to make and they are difficult. There is no doubt about it, but we have to set the ceiling for programs according to the budget process, and then within that we must try to establish priorities. So I would agree with you that making a choice between these programs is one you would not like to make, but we may simply have to do that.

Mr. HACKNEY. I understand.

Senator GARN. Thank you very much. We appreciate it.

[The statement follows:]

Statement of Dr. Sheldon Hackney, President, University of Pennsylvania

My name is Sneldon Hackney and I am President of the University of Pennsylvania. I welcome this opportunity to present to you our views on the nation's science and engineering research and education needs as they are addressed by the FY 1983 budget request for the National Science Foundation. My statement is presented on behalf of the following higher education associations: the American Council on Education, the Association of American Universities, the Association of Graduate Schools, the Council of Graduate Schools in the United States and the National Association of State Universities and Land-Grant Colleges.

This statement addresses four priority concerns in the NSF budget request:

I. A Stable Investment Policy for Research
II. The Nation's Need for more Highly Trained Scientists and Engineers
III. Research Instrumentation and Facilities Needs of Universities
IV. Science and Engineering Education

I. A Stable Investment Policy for Research

The research programs of the National Science Foundation have a unique and essential role in leading the federal government's investment in academic research. Alone, and in combination with other major federal agencies such as the Department of Defense and Department of Energy, NSF exerts an important influence on the nation's basic research enterprise. It is essential therefore, that the research programs supported by the Foundation be sustained in a predictable, stable fashion across all fields of science and engineering.

Yet, in recent years, despite a strong bipartisan commitment to the continuing federal responsibility for research, the nation's commitment to a strong research enterprise has lagged seriously behind our foreign competition. The recent "Report of the Defense Science Board Task Force on University Responsiveness to National Security Requirements" highlights the distressing trends in national R&D funding. From 1968 to 1980:

- R&D funds as a fraction of the federal budget -- down 36%
- R&D funds as a fraction of the GNP -- down 19%
- Scientists and engineers engaged in R&D as a fraction of the labor force -- down 9%.

Between 1968 and 1980 the Soviet Union, Germany and Japan increased their R&D investment as a percentage of GNP, and they increased the science and engineering component of their labor force. R&D funding as a fraction of GNP declined 19% between 1968 and 1980 in the United States; it increased in the USSR, Japan and West Germany by 14%, 19% and 16% respectively. Scientists and engineers as a fraction of the labor force declined 9% in the United States. This compares with increases of 62%, 70% and 75% in the Soviet Union, Japan and West Germany. Thus despite an extraordinary record of accomplishment in science and engineering since the end of the second world war, our nation's commitment to research is now weakened.

Unfortunately signs of this erosion can be seen in certain areas of the National Science Foundation budget for 1983. Using a relatively low projection for inflation, the NSF budget shows about a 3% rate of growth in the mathematical, physical sciences and engineering and even smaller increments in the astronomical, atmospheric, earth and ocean sciences and other areas. Upon closer inspection, however, one finds that over the period 1981 to 1983, most NSF research programs received increases at or below an annual rate of 7%, well below the amount needed just to maintain research programs at present levels. Many programs, particularly those in the social, economic and behavioral sciences are slated for reductions for the period 1981-83 of 20% or more. In addition to these cuts, the Foundation also contemplates selective reductions next year in the numbers of scientists funded and graduate students supported. Such cuts would further disrupt an already constrained research and education enterprise.

The Defense Science Board recently expressed concern about the broader destabilizing influences of shrinking NSF research programs.

> "National Science Foundation funding is perceived to be a catalyst for complimentary funding from both industry and government. Budget uncertainties have caused great concern for basic research in mathematics, physics and engineering, not to mention the life and social sciences. NSF's far reaching role in science and engineering clearly would influence the fate of areas of DOD interest should NSF budgets fail to maintain appropriate funding levels."[2]

The Senate Committee on Labor and Human Resources and the Senate Commerce Committee each recognize the need to provide for sustained stable investments in research across all of the Foundation's research programs. In their versions of the NSF authorization bill for FY 1983, both committees propose slight increases above the Administration's budget request for NSF research and related activities. We urge this Committe, therefore, to support these actions, and to appropriate funds for NSF research programs at levels equal to the final Senate authorization bill.

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[2] Ibid.

II. The Nation's Need for Highly Trained Scientists and Engineers

In many fields of science and engineering essential to the nation's security and economic recovery, we face a shortage of Ph.D. engineers and scientists. Fields adversely affected include computer science and many subspecialties of engineering. Talented U.S. undergraduates simply are not pursuing graduate studies in these fields in sufficient numbers to meet our nation's needs. Many students now reject doctoral education for a more promising and highly competitive job market. In that market universities frequently are at a competitive disadvantage in recruiting talented young faculty. As a result, the nation is widely, and correctly, perceived as "eating its own seed corn."

The present situation in our schools of engineering is particularly illuminating and serious. Undergraduate engineering enrollments are soaring toward record heights. The 1980 freshman engineering class nationwide was the largest ever recorded. Universities, however, lack the faculty and the talented graduate student assistants to handle the load efficiently and productively. Classes now are overcrowded. Many severely so. More than 10% of all engineering faculty positions in the United States stand vacant. A recent American Council on Education survey of engineering deans shows that 80% believe the quality of engineering education is deteriorating. As a result more than 20 universities have announced limitations on enrollments rather than allow a further decline in the quality of their instructional programs. Schools of Engineering, however, are not alone. Departments in other specialties of the physical and biosciences are experiencing comparable problems.

The Defense Science Board report gives several indicators of the problem's dimensions:

- Between 1972 and 1980 the number of engineering Ph.D.'s granted declined 27%, all attributable to a decline in awards to U.S. citizens.
- In 1979-80, as a result of the drop in the number of U.S. citizens earning the degree, 46% of all engineering doctorates were awarded to foreign citizens.
- The proportion of full-time foreign graduate students in science and engineering rose from 16% in 1974 to 20% in 1979.
- The foreign share of graduate enrollment in science and engineering is more than doubled the graduate enrollment in all other fields.
- Over 40% of 1979 graduate enrollment in engineering consisted of foreign students.
- Over 30% enrollment in mathematical/computer sciences consisted of foreign students.
- One out of five science and engineering doctorates was awarded to foreign citizens in 1979.
- An estimated 70% of foreign science and engineering doctorate recipients leave the U.S.[3]

The problem here is not the number of foreign students enrolled in our programs. We have an excellent record and a responsibility to provide advanced education to students from other nations. The problem is that too few U.S. students are choosing graduate education over the job market. As a nation we are failing to attract our best students into research and education careers.

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[3] Pp. 2.3 - 2.8.)

The NSF Graduate Fellowship program was established as a national commitment designed to foster excellence in graduate science and engineering education. The award of an NSF fellowship long has been recognized as a premier achievement, symbolizing the highest quality in achievement and potential. While it retains a measure of these distingushed qualities, the NSF Graduate Fellowship Program stands diminished by several years of neglect. It now falls short of providing proper recognition, effective career incentives and support to the nation's most able undergraduates in science and engineering. The number of annual NSF awards has declined to only about 450 per year. The stipend provided to the student ($6,900) and the educational allowance to the institution ($4,000) this year are increased for the first time in perhaps eight years. They still fall considerably short of meeting the competition of today's market and the needs of students.

We are encouraged that the Department of Defense has responded to the requirements of the 1980's. DOD has announced a small (125 awards are planned in FY 1983) targeted program of graduate fellowships in engineering and the sciences to attract the most able U.S. undergraduates to graduate programs in fields critical to our national security and economy. Under this new program, the stipends ($12,000) will be more competitive with the job market. The university selected by the students also will receive an educational allowance ($8,000) that better recognizes the present high costs of graduate education in the sciences and engineering.

The FY 1983 NSF budget sustains the NSF Graduate Fellowship Program as its sole remaining science education activity. We commend the Administration for protecting this vital program as, regretably, all other science education programs were terminated. But we are concerned that at its present level it represents a diminished commitment to excellence in graduate education. We urge the Committee, to fully support the budget request for the Graduate Fellowship Program as the minimum investment needed to sustain it. We further suggest that the Committee, in its report, urge the Foundation, as part of its FY 1984 budget request, to further strengthen the program along the lines adopted by the new DOD initiative.

III. Research Instrumentation and Facilities Needs of Universities

Obsolete research instrumentatioin and outdated science and engineering laboratories are seriously hampering the efficiency and competitiveness of many federal university research programs. Last year Dr. Melvin A. Eggers, Chancellor of Syracuse University, presented to this Committee the results of two studies completed by the Association of American Universities. Together they document the erosion of research instrumentation and laboratories in our leading universities. A June 1980 AAU report to NSF states, "It is a telling fact that the equipment being used in top ranked universities has a median age twice that of the instrumentation available to leading industrial research laboratories."[4] Figure 3 from that study shows the striking disparity between the equipment being used in universities and that used in comparable commercial laboratories.

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[4] The Scientific Instrumentation Needs of Research Universities, National Academy of Sciences, June 1980.

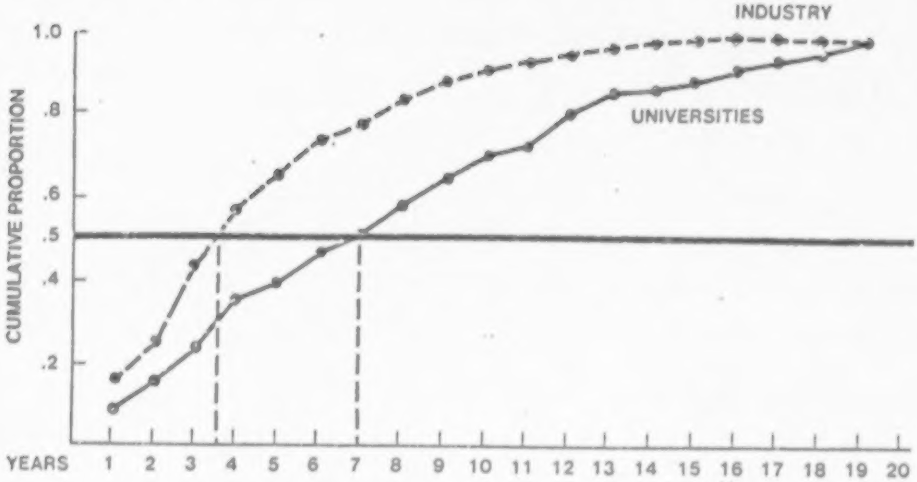

FIGURE 3. *Age of Instrumentation in Universities Twice That In Industry (Proportion of Instrumentation Inventory Purchased Less Than n Years Ago; Data Derived from Table A).*

Source: The Scientific Instrumentation Needs of Research Universities, National Academy of Sciences, June 1980.

In commenting on this report, the Defense Science Board in January 1982 stated, "This finding is negated neither by the ability of top researchers to 'find' the equipment they need nor by university efforts to use their equipment more efficiently."[5]

After reviewing the evidence, the Defense Science Board drew the following conclusion.

> "Critical shortages in university equipment and facilities have developed in recent years. The equipment obsolescence and increasing replacement costs have handicapped university efforts to maintain a research and development hardware capability. University computing equipment and facilities, labortory equipment (for both research and teaching), test equipment could all be upgraded with a rapid pay-back period. A declining space exploration program, for example, has left university research laboratories with aging equipment and no replacement prospects."[6]

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[5] The Report of the Defense Science Board Task Force on University Responsiveness to National Security Requirements, pg. 2-10.

[6] Ibid page 5-3

Supported by the DSB report, the Department of Defense in its FY 1983 budget request proposes a special $30 million research equipment initiative designed to begin the task of upgrading engineering and science laboratories that carry out DOD-funded basic research. The Senate Armed Services Committee in its report (S. Report 97-330, page 105-6) on the FY 1983 DOD authorization fully supports the need for such initiatives.

> "The Committee is concerned that our leading research universities are suffering from a severe erosion in their capacity to conduct competitive research in advanced education programs in such key fields as science and engineering. Manifestations of such erosion may be found in the fact that many laboratories and much research equipment is seriously outdated. Moreover, insufficient numbers of talented students and researchers are being attracted to careers in fields of science and engineering essential to the nation's future security. In short, the university research base in the United States in being dramatically weakened with grave implications for the national security."[1]

Attached to this testimony are statements by three American Nobel Laureates for 1981; Dr. Donald N. Langenberg, Deputy Director of the National Science Foundation and the Honorable Charles S. Robb, Governor of Virginia. Governor Robb testified before the House Committee on Science and Technology on behalf of the National Governor's Association. Together their statements support the conclusion that even in these times of budgetary constraint, key federal research agencies, including the National Science Foundation, must take an active leadership role in renewing the laboratories of our nation's research universities.

We urge the Committee to support fully the Foundation's budget request for research instrumentation, and, in doing so, to urge NSF to develop a FY 1984 budget request that will begin to address the larger problem. Universities, a number of state governments and industry are taking steps to help upgrade these institutions. Without significant federal leadership, however, the effort to modernize our research and instructional laboratories will fall short of meeting our nation's needs.

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[1] Department of Defense Authorization for Appropriations for Fiscal Year 1983 and Supplemental Authorization for Appropriations for Fiscal Year 1982. S. Rept. 97-330, April 13, 1982, pg. 105-106.

IV. Science and Engineering Education

Dr. John Wright, President of the University of Alabama in Huntsville, today presents testimony to the Committee on behalf of 18 associations and organizations in supporting restoration to NSF of a comprehensive science and engineering education program. We concur with Dr. Wright's recommendations. We are pleased to note that the Senate Committee on Labor and Human Resources, the Senate Commerce, Science and Transportation Committee and the House Committee on Science and Technology all affirm that the FY 1983 NSF budget request is wholly inadequate in the area of science and engineering education. We are encouraged that all three Authorizing Committees recommend funding science and engineering education at levels above the Administration's request. We hope that the final authorization bill will improve the Administration's request for science and engineering education. We urge the Committee to appropriate the full authorized amount, and to do so without imposing offsetting reductions in NSF research programs. To sustain a science education activity at the expense of the research programs, we believe, would be quite counterproductive and serve only to further disrupt already constrained and reduced NSF research programs.

I am grateful for this opportunity to present our testimony to you.

AMERICAN NOBEL LAUREATES FOR 1981, BEFORE THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY, FEBRUARY 24, 1982

DR. ARTHUR L. SCHAWLOW, STANFORD UNIVERSITY

"Now it is widely recognized that the research equipment available to many American scientists is really obsolete, and not keeping up with that available in some other advanced countries. For established scientists, this tends to force them to continue repeating variations of their older work, rather than to undertake something really new. But for young scientists, especially at universities, obtaining equipment funds to begin research can be a nearly insuperable obstacle. Some very good young scientists are choosing not to join university faculties, even when positions are available, because they fear that they will not be able to do any research. The universities need to attract such people, for they are the ones who will be, and will educate, the scientists of the future. It is important to note, in these days when the problems of engineering manpower and education are being recognized, that physicists play an important part in new technologies. In 1960, there were no trained laser engineers, and physicists predominated in the development of lasers. Similarly with the sudden growth of genetic engineering, much of the work is being done by people trained as scientists. It is important that the universities continue to be staffed by creative people who are themselves participating in the creation of new knowledge. These are the people who can teach science as a dynamic, growing subject rather than as a body of dusty facts entombed in textbooks."

DR. NICHOLAS BLOEMBERGEN, HARVARD UNIVERSITY

"This fine system (of academic research) has come under stress because the rapidly escalating costs of instrumentation and technical support for modern research have encouraged a trend toward larger, and often less flexible, research institutes. The small-scale basic research units in academic institutions in the United States suffer from obsolescent instrumentation and support facilities. These are decidedly inferior, on the average, to those found at industrial and governmental laboratories in the United States, and also inferior to those found in academic institutions on the Western European continent. In my opinion it is worthwhile to keep the individual academic research projects competitive by providing special funds for a much-needed upgrading of instrumentation and support facilities in U.S. universities."

DR. TORSTEN N. WIESEL, HARVARD MEDICAL SCHOOL

"It is particularly disturbing that the predominance that the United States has enjoyed over the last few decades is seriously threatened. In a period of budgetary restriction, research requires increasingly sophisticated instrumentation, so that the budgetary needs of staying at the forefront of research are accelerating well ahead of inflation. Other countries, including Germany, Switzerland and Japan, show much more willingness to adequately equip their laboratories for basic research. For years the best scientific minds came to the United States because of the opportunities to carry out independent and original research. Now I have noted a number of disturbing instances in which prominent American scientists are moving elsewhere to pursue their research under conditions that are better than those available to them here."

DR. DONALD N. LANGENBERG, DEPUTY DIRECTOR, NATIONAL SCIENCE FOUNDATION, BEFORE THE HOUSE SUBCOMMITTEE ON SCIENCE, RESEARCH AND TECHNOLOGY, MARCH 4, 1982

"There is an emerging consensus in universities, the federal government and private industry that there is a critical and growing need to replace obsolete and worn-out research apparatus and laboratory facilities in the nation's research universities. * * *

"If the general assessment of the scope and nature of the problem is a correct one, and we believe that it is, it means that the productivity and efficiency of the nation's academic research enterprise has already declined and will continue to decline. Most of modern science and engineering research is instrument-dependent. Capital investment in advanced instrumentation and facilities is necessary if we are to maintain our national position at the forefront of a wide variety of disciplines and to obtain maximum productivity in the future from our investment in research."

THE HONORABLE CHARLES S. ROBB BEFORE THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY, APRIL 29, 1982

"In the past several months, Virginia's higher education planning agency has surveyed all the states to determine the extent to which research equipment at our colleges and universities is obsolete, in disrepair, or simply unavailable. The results of our survey indicate that we are on the brink of crisis because many of our major institutions no longer have the equipment we need to conduct research on the frontiers of knowledge. * * *

"Make no mistake about it. If the 'brain drain' from universities to industry is hurting now, the loss of outstanding intellects to teach the next generation will cripple both America's universities and its industries as this century draws to a close. * * *

"My fellow Governors and I urge Congress to declare its unequivocal support for the development of advanced technologies, to identify appropriate educational programs and research as a national priority in these times of economic difficulty and international tension, and to provide adequate federal dollars when appropriate. As Governors, we pledge our support of the partnership linking the states, the federal government, and private enterprise. We believe that renewed emphasis upon this partnership will strengthen our nation's reputation for technological innovation and excellence.

"Nothing less than the jobs of the next generation and America's economic position in the world are at stake."

STATEMENT OF SARAH E. KLEIN, PRESIDENT, NATIONAL SCIENCE TEACHERS ASSOCIATION

Senator GARN. Next is Sarah Klein, president of the National Science Teachers Association.

We are happy to welcome you here today.

Ms. KLEIN. Thank you very much. It is indeed a pleasure to be here, and I welcome this opportunity. Thank you for letting us present this testimony to your Subcommittee on HUD and Independent Agencies.

Like the gentleman preceding me, I would like to submit my written testimony for the record and just talk informally about the written record.

Senator GARN. We will place your entire statement in the record at the close of your oral presentation.

Ms. KLEIN. Thank you very much.

I am really delighted to hear you say that choices have to be made, and I am here speaking on behalf of one of those choices. I feel a tremendous responsibility on behalf of all science teachers and feel that if there has to be a cut in budget, that it should come from research put into science education at precollege level for NSF.

As an eighth grade science teacher, over the years NSF has meant a great deal as far as my own background and, I know, many colleagues. With the increasing age of science teachers, we must do something to keep the young people current, we must keep them updated and those of us that are—and I use this in quotes—"oldies but goodies"—certainly need to be updated with regard to the electronics and the age of robotics in which we are headed.

There is no doubt that the NSF programs have had a great deal of criticism about their ineffectiveness, but we do have statistics to show in our testimony that minority students did learn more through the NSF curriculum than they did a traditional course, and we feel that with the high quality of courses that were produced from NSF, that these do need to be updated, they need to be made current, and there is no funding for that at the present time from many sources unless it is just a private book company that is trying to make that well known profit.

We really must base the future on the past, and I think that with these curricula that it is one way that we can update the past and go into the future.

In a recent study that has come to our attention, out of 18,600-some-odd science teachers in the country, about one-third of these schools have physics teachers, about two-thirds have chemistry teachers. There is indeed a crisis in physical sciences as far as teachers are concerned. Teachers that are unqualified and uncertified are teaching science courses.

So we feel very strongly that this could change with encouragement from the National Science Foundation. Teachers, perhaps, are lacking in one or two courses in order for them to become certified in a particular area and that one or two courses that NSF could provide would certainly be one of the benefits that could be derived from this particular program. There are other places that I feel NSF could be a help, and that is at the elementary level. It is a well-known fact that students continue learning, continue growing whether they are interested at an early level, at an early age, and if we cannot keep these youngsters interested, they will just, out of natural attrition, go into something else and will not stay in science or mathematics.

We feel very strongly that mathematics is another critical area that needs to be updated. We need to bring the computers into the classroom. We need to have some special training so that students can become qualified at an early age to use those computers.

It was most gratifying recently when I helped judge a computer contest in San Diego that there were 85 projects that were done by youngsters from grade 4 through grade 12 in four different categories with the computer. It is very interesting to note that they are being used, students are being trained, but we need to have it in many more places than just San Diego.

We have stated in our testimony how we feel some of the things could be done. It is near the end of the testimony and I think that if serious study will be given to this, this will give you some guidance in making your decision. We feel very strongly that this newly formed Commission can be beneficial, but we cannot wait until this Commission reaches some decision as to what could be done for the future. We are in the present; we must act now. We feel that it is time to do something for science education and science teachers.

Teachers are an odd lot, they do other things besides teach for salary. But, like anyone else, we are not adverse to a salary increase either.

Last year Don MacCurty, the president of our association at that time, had traveled extensively and had talked to many teachers from both the elementary level through postgraduate level, and I think he was one of the very first persons that brought to our attention the fact that we must do something to substantiate all of these facts that he had heard just verbally. So NSTA did conduct their own survey this fall and many of the statements that we have made we have found to be so true.

Teachers' average age is 41, average length of time they have been teaching is 16 years. One in ten have been back to school in the last 10 years to upgrade their science education.We feel that speaks for itself.

We must not let our investment in the future be deterred by not funding NSF projects. Thank you very much.

[The statement follows:]

STATEMENT OF SARAH E. KLEIN, PRESIDENT, NATIONAL SCIENCE TEACHERS ASSOCIATION

The following testimony is presented by Sarah E. Klein, President of the National Science Teachers Association (NSTA). The NSTA is the largest science education organization in the world. It is the only science education organization that is concerned with the professional aspects of science education at all levels for all science disciplines.

Mrs. Klein is an 8th grade general science teacher at Roton Middle School, Norwalk, Connecticut. She is currently on leave to carry out her responsibilities as President of NSTA. Mrs. Klein has been active in NSTA for many years, and over the past year has visited schools, talked to teachers, and participated in numerous science meetings throughout the United States, Canada, England, and France. Mrs. Klein wishes to acknowledge the efforts of Bill Aldridge, Executive Director of NSTA, and of James Shymansky, of the University of Iowa, for documentation and preparation of this testimony.

The Crisis in Secondary School Science and Mathematics Education

Our nation faces unprecedented problems in science and engineering education. Most severe of these problems are at the secondary school level where there is a critical shortage of qualified science and math teachers. The paucity of supplies, resources, appropriate materials, and support have reduced the quality of science and mathematics education at the secondary school level to a point that U.S. national security and the nation's efforts toward improved productivity are dangerously threatened.

Shortages of Secondary School Science and Math Teachers

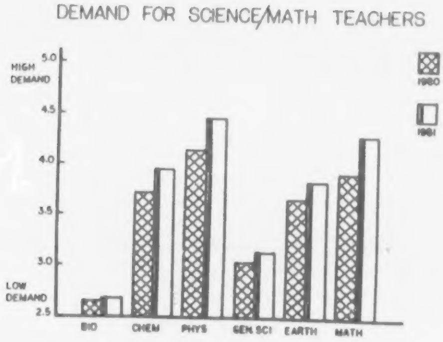
In the fall of 1980 and again in the fall of 1981, Howe and Gerlovich (1) surveyed the 50 state science supervisors to assess supply and demand for secondary school science and math teachers. Shortages were found for 1980-1981, and those shortages have become more severe in 1981-1982. As shown in Table I, this problem is national in scope, and the shortages are critical in physics, mathematics, and chemistry.

SCIENCE/MATH TEACHER SHORTAGES

	Critical Shortage		Shortage	
SUBJECT	1980-1981	1981-1982	1980-1981	1981-1982
PHYSICS	21	27	22	15
MATH	16	18	19	25
CHEMISTRY	10	9	25	29

TABLE I

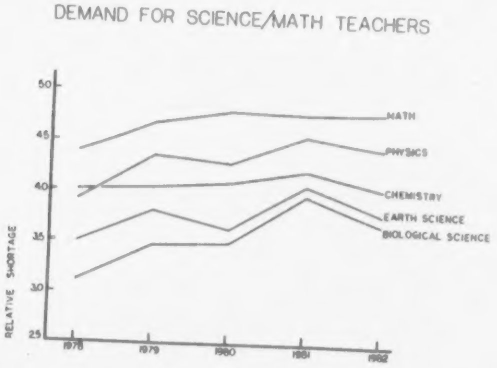
When the science and math teacher shortage problem is expressed in terms of demand, as indicated on a scale from 0 to 5, the results, shown in Figure 1, lead to the conclusion that the shortage has been critical and has worsened in the last year.



Based on a survey of state certification departments From Trevor G. Howe and Jack A. Gerlovich, "National Study of Estimated Supply and Demand of Secondary Science and Mathematics Teachers," Iowa State University, 1982

Figure 1

In surveys of placement officers conducted by James Akin (2) from 1978 to 1980, "considerable shortages" of teachers were found for math, physics, chemistry, and general science.



Based on a survey of teacher placement officers. From James N. Akin, ASCUS Report, "Teacher Supply/Demand," 1981

Figure 2

Severe Decline in Numbers of Persons Prepared to Teach Science and Math

In December, 1981, the NSTA surveyed 600 colleges and universities that have teacher training programs (3). Year-by-year data were acquired for the ten-year period of 1971-1980. The results shown in Table II and Figures 3 and 4 are shocking. There has been a 77% decline in the number of math teachers and a 65% decline in the number of science teachers prepared to teach in secondary schools. As shown in Table II, not only has the supply of persons trained to teach science and math severely declined, but the fraction of those trained who do go into teaching has also declined.

The combined effect is a 68% reduction in newly-employed science teachers and an 80% reduction in newly-employed math teachers since 1971.

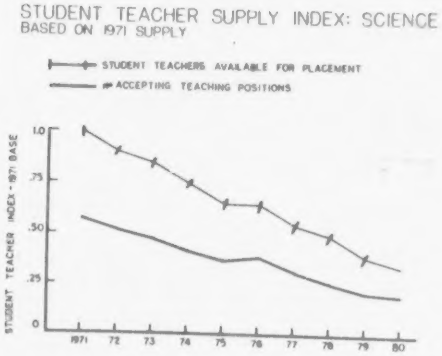
SCIENCE/MATH TEACHER SUPPLY DATA 1971-1980*

		1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
SCIENCE	Graduating Teachers	100	90	85	75	65	65	55	50	40	35
	% Entering Teaching	59	58	58	55	56	59	56	52	54	54
MATH	Graduating Teachers	100	91	86	71	60	45	36	27	27	21
	% Entering Teaching	63	68	64	65	62	61	61	59	60	55

* Values represent percentages indexed to 1971.

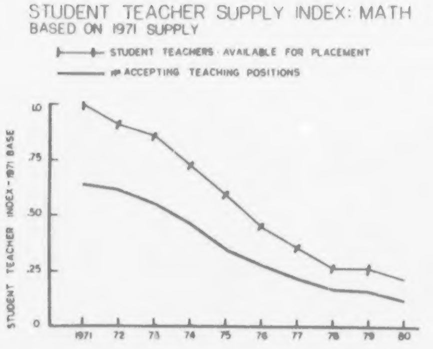
** Based on data from a nationwide sample of 140 university/college placement officers.

Table II



Based on NSTA survey of college and university placement officers. Conducted by J. A. Shymansky, The University of Iowa, 1982

Figure 3



Based on NSTA survey of college and university placement officers. Conducted by J. A. Shymansky, The University of Iowa, 1982

Figure 4

Employment of Unqualified Science and Math Teachers

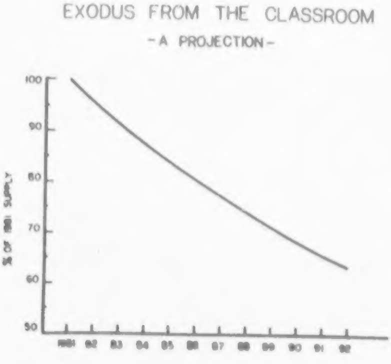
In another NSTA survey (4), also conducted in December, 1981, and analyzed by James Shymansky of the University of Iowa, secondary school principals provided the information. Among newly-employed science and math teachers, 50.2% were unqualified to teach science or math. They were employed on an "emergency basis" because no qualified teachers could be found. When these data are examined by census region, the results are especially bad in states where high technology industries require the best-trained science and math personnel. Table III shows, by census region, the percentages of newly-employed science and math teachers for the school year 1981-1982 who are unqualified to teach these subjects.

Census Region	Percentage of Newly-Employed, But Unqualified Science and Math Teachers	
	1980-1981	1981-1982
Pacific States	75%	84%
Mountain States	44	43
West North Central States	26	43
West South Central States	63	63
East North Central States	23	32
East South Central States	43	40
Northeastern States	11	9
Middle Atlantic States	40	46
South Atlantic States	48	50
NATIONWIDE	45%	50%

Table III

Ages, Experience, and Plans of Science and Math Teachers

The evidence of a severe shortage of science and math teachers at the secondary school level is overwhelming. To compound this problem, results of an NSTA survey of science teachers show that schools have an aging faculty and that one in four of the younger faculty plan to leave teaching completely. The average age is 41, and the average experience is 16 years. Almost 5 times more science and math teachers left teaching last year for employment in non-teaching jobs than left due to retirement. If the present exodus of qualified science and math teachers from secondary schools continues, the nation will have a net loss of 35% by 1992.



Based on the 4% rate at which science and math teachers left classroom teaching in the years 1980 and 1981

Figure 5

School Populations - Increasing or Decreasing?

Analyses of population data and of school projections compiled by the National Center for Educational Statistics suggest that science and math teacher demand will increase over the next several years.

Elementary school K-8 enrollments will increase by 9% in the next ten years, while secondary school enrollments will drop by 16%. By 1996 secondary school enrollments will increase again. The declines in qualified science and math teachers has already exceeded past enrollment declines by a factor of three. When the new surge of elementary school children reach the secondary schools, they will have been depleted of their science and math teachers.

Conclusions about Teacher Shortages

Independent recent surveys all show a severe shortage of secondary school science and math teachers. There has been a catastrophic decline in the number of persons prepared to teach science and math, and of those prepared, many do not take teaching positions. Secondary schools are employing record numbers of unqualified persons for science and math teaching positions because qualified teachers cannot be found. The problems are most severe in regions of the country where the greatest efforts will be made for defense preparedness and high technology industry. Thus there is a dangerous mismatch between scientific and technological training capability and national need.

Quality of Science and Mathematics Education

The severe shortages of secondary school science and math teachers and the resulting employment of unqualified teachers on an emergency basis is a major factor in the decline of quality in secondary school science and math education. For the teachers who remain in the science and math classroom, there are other constraints which have made the situation deteriorate further.

From the recent NSTA survey, we know that 60% of science teachers report recent cuts in their budgets for supplies and equipment. These cuts occur at a time when school labs are already obsolete, and when computers and other components of modern electronics are essential in an up-to-date curriculum. From the same survey, we learned that 79% of these teachers had not completed at least a 10-hour course or workshop in over ten years. Also, 69% have never attended a computer course or workshop. Finally, 40% have not attended a course or workshop since they began teaching, which has been an average of 16 years.

In another recent national survey conducted by NSTA, elementary school teachers provided the responses (5). Approximately 51% reported that their undergraduate training did not prepare them to teach science. Furthermore, 71% of the school districts had no inservice training for science, and 64% no longer had science consultants assigned to their schools.

There has been much public discussion of declines in SAT scores, but less attention has been given to declining scores in the national assessment. There has been a decline in recent years, and now those declines are affecting even our best science and math students.

Prior NSF Support of Science and Engineering Education

There is, among those in the Administration, and among many others, the mistaken belief that science education has received substantial support, especially in recent years, and that since we now see all of these serious problems, the infusion of massive federal support has been a failure. The facts are quite the opposite. The NSF support for science and engineering education has been declining steadily and steeply for the past 22 years. Figure 6 shows how science education's share of the total NSF budget has dropped from a high of 47% in 1959 to its present low of 2%.

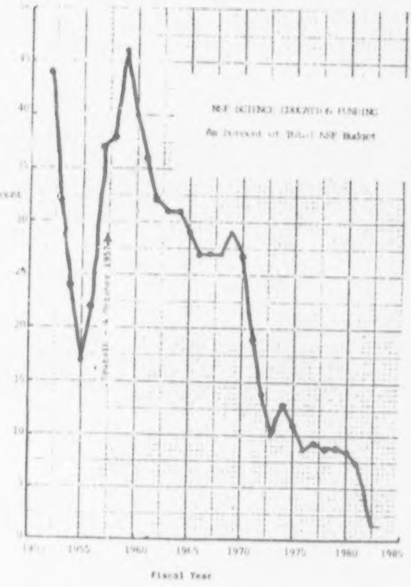


Figure 6

Support for pre-college science education has dropped even more sharply, from 72% of the science education budget in 1959 to 22% in 1980. In terms of the total NSF budget, the pre-college share has dropped from 34% in 1959 to its present low of less than 1%.

The NSF support for secondary school science and math has fallen to a negligible level, and the present cluster of national problems in secondary school science and math education can in large part be attributed to NSF's negligence of this component of their Congressionally mandated mission. Figure 7 shows how the decline in NSF support at the pre-college level correlates with declining achievement in science as measured by the National Assessment of Educational Progress; although, correlations do not necessarily mean cause and effect. But coupled with all the other evidence, this correlation may well be as good an indicator of a direct relationship as is the case of smoking and cancer.

NSF Curriculum Development Projects

Much of the demise of NSF's science education support has resulted from criticisms of curriculum development activities. There are legitimate criticisms that one can make of the "new curricula" produced under NSF support: Those projects often purged applications, concentrated heavily on pure science, and appealed mainly to the very brightest students. Their difficulty level contributed to the reduction in the numbers of students studying science and mathematics in recent years. Yet, according to preliminary results of a very recent project (6), the new curricula were far more successful than most people realized. In this project, an analysis was made of 105 studies involving 45,000 students. Comparisons were made between students enrolled in new science curricula and traditional curricula. On every kind of measure, including achievement, attitude, and process skills, students taking the new NSF curricula scored overall 14% higher. For the BSCS Biology and Chem Study materials, the students scored higher by more than 17%. What is most significant is the fact that

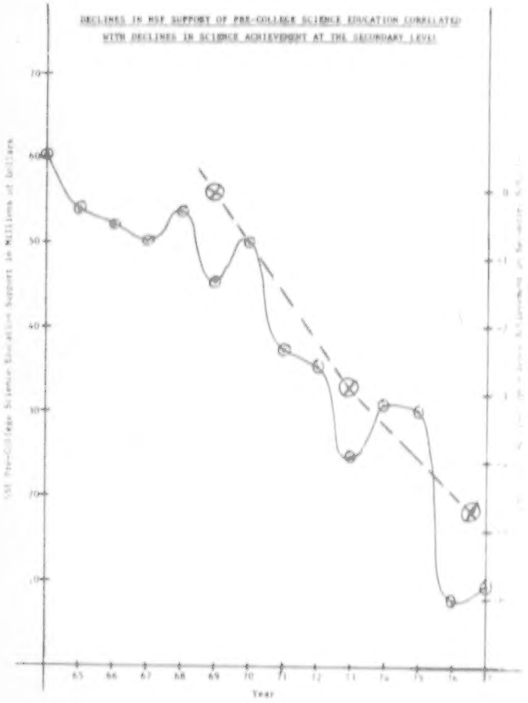
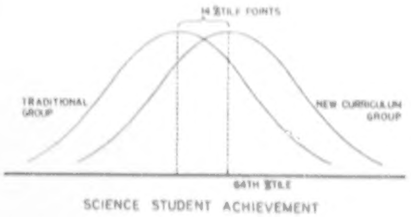


Figure 7

students from low socio-economic groups scored 24% higher using new NSF-supported curricula than traditional curricula. Since a larger proportion of our minority population are in the low socio-economic categories, the new curricula, supported by NSF, gave minority children a decided edge over similar children exposed to traditional materials.

EFFECTIVENESS OF NEW SCIENCE CURRICULA



Composite effect of student performance across all new science curricula based on student sample, N=45,000. From Anderson, et al., NSF Grant SED 80-12310

Figure 8

These studies covered a period of several years in the 1960's and 1970's. Few teachers are left in the schools now who are qualified to teach such curricula, and essentially none have been given the inservice training to do so since NSF abandoned that kind of program several years ago. Also, the materials are badly in need of revision and modification to take into account computers, modern electronics, and applications to technology. The problem of offering appropriate science to less able children also must be addressed.

Comparisions of U.S. and U.S.S.R. Science and Math Education

Recent comparative studies (7) in science and engineering education between the Soviet Union and the United States suggest a major offensive by the U.S.S.R. to increase its economic productivity and defense preparedness through science and engineering education. The U.S.S.R. offers its pre-college students sequences of course material in science and mathematics starting with an intuitive level of understanding. Then students progress to empirical levels; finally, they are ready for the formal axiomatic and theoretical understandings. The actual time spent begins with only a couple of hours per week and changes gradually over three or four years until students spend four to five hours per week in class. Thus the Soviets not only offer all students quantitatively more contact with the sciences and mathematics, they do so systematically to ensure that students progress in a way that matches stages of intellectual development. In U.S. secondary schools, and in colleges, students enter a course in physics or chemistry and are immediately introduced for the first time to the highest levels of abstraction, without any intuitive basis or prior empirical knowledge. Thus many find these subjects hopelessly difficult and fail or drop out. Most students simply avoid taking these subjects, having heard how difficult they are. The lack of application in science curricula and their failure to relate to personal and societal problems and issues further alienate students.

What are the Priority Problems?

The most critical problems are at the pre-college levels, especially in secondary school science and mathematics. Those problems are, in order of priority:

1) Critical shortage of physics, mathematics, and chemistry teachers at the secondary school level;

2) Substantial numbers of unqualified persons are teaching science and mathematics in secondary schools;

3) Most certified science and mathematics teachers at the elementary and secondary levels are badly in need of inservice training;

4) New sequences of science and math courses and materials are needed which match stages of intellectual development of children;

5) Elementary school science consultants are needed who understand science, stages of intellectual development of children, and who know what resources are available;

6) Elementary and secondary schools need access to microcomputers, low-cost supplies, and other resources; and

7) Science curricula need revision, and teachers need training in using new materials and new methods of sequencing content.

NSF's 1982 Budget for Science and Engineering Education

Of the $20.4 million appropriated for NSF science education for 1982, $15 million was for graduate fellowships. Some $700,000 was designated to support a "commission," and the balance was used to meet "prior obligations."

Since graduate fellowship support is but another form of support for scientific research, the NSF has essentially eliminated all science education activities. The Administration has successfully forced NSF to abandon one of the missions required by its enabling legislation. It is time that NSF ask Congress either to change the NSF organic act and delete science education from NSF's mission or stop the deception that graduate student support alone is somehow equivalent to support of science education at all levels and proceed with its responsibilities by providing a budget which addresses serious national problems in science education.

The Special Commission on Science and Engineering Education

The only new activity for science education in the 1982 budget was $700,000 to support a special commission on science and engineering education. The NSF spent upwards of $3 million over the past five years for studies at the pre-college level. There is ample evidence of what the problems are and what is needed to solve them. What is now needed is federal action to address documented and serious national problems. Regardless of the potential value of the commission, there can be no justification in waiting 18 months for its recommendations before funding other appropriate science education programs.

If a major problem faced physics research, we would not stop all other physics research while we focussed public attention on the problem. The National Science Teachers Association will assist the commission in every possible way, but we strongly recommend that the Congress provide 1983 funds to attack the most severe of the problems already identified and documented.

The Federal Role--An NSF Science Education Program for 1983

The critical shortage of secondary school science and math teachers cannot be solved in 1983. This is also a problem which must ultimately be solved at the state and local levels. Compensation for science and math teachers must be competitive with those in industry. Even though the federal government cannot solve the salary problem, there are other federal measures which can help reduce the severity of this problem. The long-term shortages can be addressed by stimulating new entrants to teacher training programs in science and mathematics. This can be accomplished through NSF scholarships and NSF-supported programs of publicity on the need for teachers.

Problems of quality can and should be addressed at the federal level. In the short term, the NSF could support summer and academic-year courses and workshops for marginally-qualified science and math teachers, so that they may reach some minimal level of qualification to teach the assignments they have been given. NSF has considerable experience with such programs. If they are administered without stipends, they can be extremely cost-effective.

The problem of establishing new sequences of science and math courses to match the stages of intellectual development of children is most difficult to solve. Since this problem is really one of research and development, it cannot be justified by a local school system or a state government. It is appropriately a federal responsibility. The most cost-effective solution would be for the NSF to support development and implementation of a model sequence in two or three systems. These models would be carefully developed in cooperation and with assistance of scientists and science education experts at universities. Detailed guidelines for establishing the sequence would be prepared and widely disseminated. The NSF might then provide support only for consultant services to schools that chose to implement the approach, using the guidelines which had been developed.

The problem of upgrading qualified science and math teachers can be solved by offering short courses and workshops. The NSF has models of these already in operation and could easily continue these programs.

The need for low-cost supplies and other resources can be addressed by NSF through a program of support for area Science Instruction Resource Centers, modeled after the one created by Douglas Lapp in the Fairfax, Virginia School District. Since teaching resources should be a local responsibility, funds should be provided only for establishing the centers, with a complete phase-out of federal funds over a two-year period.

Microcomputers could be supplied through an NSF program of partial support. Even a level of support by NSF of 25% of the cost could have great leverage in bringing larger numbers of microcomputers into the schools. Again, equipment is a local responsibility, but a small matching federal fund could stimulate great local expenditure. Also, when there is one computer present in a school, the demand increases rapidly, and schools find ways to purchase additional units. Given the availability of inservice programs for teachers, proper utilization could be assured.

The revision of curricula to bring them up to date and to accommodate to the new technology, applications, and societal problems, can be accomplished through conventional, but carefully monitored, curriculum development projects. Such projects are the most easily justified as federal responsibility, since the resulting materials are used throughout the nation.

The problems of elementary school science are immense, but a high-leverage approach, with relatively low cost, would be an NSF program of summer and inservice studies for science consultants. Also, some modest one-time grant support could be provided to school districts that were willing to reinstitute a science consultant program for their elementary schools.

Does the American Public Think that Tax Funds Should be Used by NSF to Support Science Education and Basic Research or Just Basic Research?

The Thirteenth Annual Report of the National Science Board, Science Indicators 1980, dated March 31, 1981, offers much interesting and useful information.

The table below is taken from that NSF report. According to this report to the President, the Public would rank science education second as its choice "to receive science and technology funding from tax money." The Public would rank basic scientific research tenth in its choice to receive such tax money. Science education is even ranked ahead of national defense.

Given clear evidence of public preference for spending tax money for science education over spending it for basic research, and given the Congressional mandate in the organic act of NSF to support science education at all levels, it is most difficult to understand why NSF is forced to ignore this responsibility.

Is the NSF Providing More Science and Engineering Education Support to Graduate Students from Foreign Nationals than to American Children?

The answer is yes! Some 90% of all science and engineering graduate student support is from research assistantships. At least 20% of the funds from research grants are used to provide research assistantships. Over 20% of all graduate students in science and engineering are foreign nationals (40% of those in engineering are foreign nationals). If we consider only basic research funding of $5.9 billion, we see that the U.S. Government subsidy to foreign nationals in science and engineering education is more than $200 million. This is more than twice the NSF science and engineering education budget in 1980. Thus, while such nations as Iran, Japan, and Saudi Arabia use their resources to educate their children in science at the pre-college level, the U.S. neglects the science education of its children while providing a U.S. subsidy for graduate education in science for young people from competing nations.

Appendix table 6-10. Areas the public would most like to receive science and technology funding from tax money: 1972-79

Area	Percent in 1979	Rank[1] 1972	1974	1976	1979
Improving health care	50	1	1	1	1
Developing energy sources and conserving energy	46	(2)	(2)	(2)	(2)
Improving education	39	5	4[3]	3[3]	2
Reducing crime	36	3	2	2	3
Developing or improving methods for producing food	23	(2)	(2)	(2)	(2)
Reducing and controlling pollution	22	2	3	3[3]	4
Developing or improving weapons for national defense	16	10[3]	11[3]	8[3]	5[3]
Preventing and treating drug addiction	16	4	4[3]	5	5[3]
Developing faster and safer public transportation within and between cities	13	7	7	7	7
Improving the safety of automobiles	9	6	6	6	8
Finding better birth control methods	9	8	9	8[3]	9
Discovering new basic knowledge about man and nature	8	9	8	10	10
Exploring outer space	6	10[3]	11[3]	11	11
Predicting and controlling the weather	4	10[3]	10	12	12
	(N = 1,635)				

[1] In 1979, respondents were asked to limit themselves to three areas, and slight changes in the wording of some items were made.

[2] "Developing energy sources and conserving energy" was not included in the listing prior to 1979 and "developing or improving methods for producing food" was not included prior to 1976. These areas were therefore omitted from the rankings.

[3] Tied for the indicated rank.

SOURCES: *Attitudes of the U.S. Public Toward Science and Technology.* Study III (Prince N.J.: Opinion Research Corporation, 1976), pp. 56-57; Jon D. Miller, Kenneth Prewitt, and Robert Pearson, *The Attitudes of th . S. Public Toward Science and Technology* (Chicago: National Opinion Research Center, University of Chicago, 1980), p. 13

Where are the Funds for Science and Engineering Education?

The Administration's proposed NSF budget calls for a total of $1,072.8 million in 1983. Needed science education programs could be financed by holding the total research and related activities budget to a smaller increase instead of the 8.7% increase which is proposed. This will free up the small funding needed for science education activities.

NSF Science and Engineering Education Recommended Program Elements for 1983

NSF Undergraduate Scholarships for Math and Science Teaching (2,000 @ $1,500 each)	$3.0 million
Science and Math Teaching Careers Publications and Dissemination	0.5 million
Tuition, Books, and Materials for Summer and Academic-Year Courses and Workshops (2,500 marginally-qualified teachers @ $2,000)	5.0 million
Model Sequences for Science and Math Courses (3 projects @ $1 million)	3.0 million
Short Courses and Workshops for Upgrading Qualified Science and Math Teachers (5,000 teachers @ $1,000)	5.0 million
Model Science Instruction Resource Centers (25 @ $200,000)	5.0 million
Partial Support Grants for Microcomputers (25% of $2,000 for 5,000 schools)	2.5 million
Curriculum Revision and Enhancement Projects	4.0 million
Programs for Science consultants for Elementary Schools	2.0 million
TOTAL	30.0 million
Graduate Fellowships	15.0 million
	$45.0 million

One of the major arguments used to eliminate science education support is that the problems are too great and these NSF funds too small to have a significant effect. Yet this budget would directly affect 9,500 science and math teachers and 10,000 schools. It would indirectly affect another 50,000 teachers and millions of science and math students in their classes. The program elements of the Science Education Directorate have been and can be the most cost effective of ali federal programs. They are more competitive than the NSF research program. Where 5 - 10% of science education proposals have been funded, some 30 - 40% of research proposals are funded. The NSF science education programs have been and can be of high quality because they are competitive and have never been administered as entitlements. It is the prestige and high quality of the NSF programs which offer the strongest reasons why NSF and not another federal agency should offer these programs.

Sources

(1) T. G. Howe and J. A. Gerlovich, "National Study of the Estimated Supply and Demand of Secondary Science and Mathematics Teachers," Unpublished Paper, November 6, 1981.

(2) J. N. Akin, "Teacher Supply and Demand: A Recent Survey," (ASCUS, Box 4411, Madison, WI 53711) 1980.

(3) Preliminary results of December, 1981, NSTA Survey of 600 Colleges and Universities with science and math teacher training programs.

(4) Random sample of 1,016 U.S. secondary school principals in December, 1981. Analysis done by Dr. James Shymansky using staff and computers at University of Iowa.

(5) Preliminary results of survey undertaken in January, 1982, by Kathleen M. Donnellan, NSTA Preschool/Elementary School Division Director, Springfield, Massachusetts Public Schools.

(6) Ronald Anderson, James Shymansky, et. al. Preliminary Results of Project NSF SED 80-12310, February, 1982.

(7) C. P. Ailes and F. W. Rushing, The Science Race: Training and Utilization of Scientists and Engineers, U.S. and U.S.S.R., Chapters I, II, (Crane Russak, New York) 1982.

INCREASING NUMBER OF TEACHERS

Senator GARN. In the first several pages of your testimony, you discuss the shortage of math and science teachers. Can you pinpoint for me what impact the $45 million program you are suggesting would have on increasing the number of teachers?

Ms. KLEIN. Yes; I was hoping you would ask.

I believe that if teachers know that there are ways in which they can upgrade and stay current, that they would not leave the field, that they would be willing to stay in the field of science. Working with children is a unique trade, and for the majority of the people that are teachers I feel that is one way in which they would stay in the field, knowing that they could get support for keeping current.

Another is by establishing the resource centers which we recommend. With these resource centers science teachers could avail themselves of current materials and update themselves periodically without having to take time out to go for a special kind of a course.

Another way in which I feel that it would upgrade would be to see that specialists are put into the elementary schools at the elementary level. We feel that if there were some initiative taken through NSF, that the private sector would be willing to match these funds when they can see that this would be a very fruitful and very productive way to begin with the elementary level and still instill better science education.

These are some of the ways. I will be glad to go into more detail, if you would like an additional written comment on that question.

Senator GARN. I would appreciate if you would submit that for the record.

Thank you very much.

Ms. KLEIN. You're very welcome. We really appreciate having this opportunity.

[The information follows:]

The following is in response to the question, What impact will the $45 million program you are suggesting have on increasing the number of teachers? First, let me point out that of that $45 million, $15 million is for graduate fellowships, and thus is just another form of support for research. This part does nothing to help increase the number of science teachers, although your committee might require that a portion be set aside for graduate fellowships for persons who would become secondary school science or math teachers.

The $30 million remaining is only partly aimed at addressing the shortages of qualified science and math teachers. There are other serious problems, like upgrading the teachers who are in the schools.

An amount of $30 million may appear to be small, but the effect of going from zero to $30 million in science education is enormously greater than the alternative of adding $30 million to $1,000 million for research support.

Consider the areas of greatest need—physics, mathematics, and chemistry. There are 115,000 math teachers, 6,700 physics teachers, and 11,400 chemistry teachers in the nation's 29,000 secondary schools. This is 4 math teachers per school, one physics teacher for every 4 schools, and less than one chemistry teacher for every 2 schools.

The $3 million in undergraduate scholarships will produce 2,000 new science and math teachers three or four years from now. If half of these are designated for physics and chemistry, this program will produce more than 5 percent of the total now teaching in these fields.

The $0.5 million proposed for dissemination of information in science and math teaching careers is quite sufficient to alert prospective students. We believe that there are still dedicated and interested young people who would want to teach if they believed there were employment opportunities.

The balance of funds we have requested will go a long way toward bringing up to date unqualified or marginally-qualified teachers who are now in our nation's classrooms.

A budget of $45 million for science education activities including $30 million or so at the pre-college level can offer enormous leverage in addressing the present crisis. The same funds simply added to some research component of $200–300 million offers little if any added benefit. The numbers of people affected are vastly different. Most of the people who have ever heard of NSF in a positive way have that experience through science eduction, not through research.

STATEMENT OF JOHN WRIGHT, PRESIDENT, UNIVERSITY OF ALABAMA IN HUNTSVILLE, ON BEHALF OF AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES AND OTHERS

Senator GARN. Next I would like to call John Wright, president of the University of Alabama on behalf of the American Association of State Colleges and Universities and others.

Mr. WRIGHT. My name is John Wright, I am president of the University of Alabama in Huntsville. I am pleased to have the opportunity to submit testimony to the committee on the fiscal year 1983 National Science Foundation appropriations bill, with particular emphasis on the Science and Engineering Directorate.

I represent 354 member institutions of the American Association of State Colleges and Universities and currently I am chairman of its committee on science and technology. Our testimony also is supported by a large coalition of other associations that are listed in the testimony that has been turned in.

Our institutions are located throughout the United States and include Weber State College and Southern Utah State College.

Senator GARN. I appreciate the fact you said Weber correctly.

Mr. WRIGHT. I had the opportunity to visit that institution as a part of an NSF task force when they received the grant from the National Science Foundation several years ago, so I am familiar with it.

This past year has been an increasingly bleak and frustrating one for those of us interested in, and concerned with, the future scientific and technological strength of the United States. The administration's decision to cut funding for all science and engineering education programs, with the exception of the graduate fellowships program, is an example of fiscal considerations—reduced budgets—interfering with perceived national goals—adequate supply of scientific and technological manpower.

For this reason, I urge you to reconsider the administration's budget request for science and engineering education at the National Science Foundation. As a guideline, I would urge you to adopt at least the level of spending contained in the bill, H.R. 5842, recently voted upon by the House Science and Technology Committee. The additional sum of money in H.R. 5842 for science and engineering education, $30 million, is far lower than the actual need, but takes into account current budgetary restraints.

I would also urge you to distribute additional appropriations among three functional categories: precollege, undergraduate, and research in science and engineering education and public understanding programs. These levels in H.R. 5842 are necessary if we are to maintain the vestiges of a national system of science and engineering education and to fulfill the dual mandate of the Foundation's charter, research and education.

The proposed cutback in funding for science and engineering education comes at the very time in our history when the United States position of world leadership in science and technology is being severely challenged. The proposed cuts, we believe, ultimately will jeopardize our national security and economic well-being by undermining American industrial, commercial, and military strengths.

There have been several recent studies and I will invite your attention to them although I won't go into detail.

The severity of the situation was highlighted in a recent study by SRI International that compared the education and employment of scientists and engineers in the United States and Russia. Based on its findings, the report concludes that:

> There is a need for concern in the United States and that concern should be manifested in a systematic and comprehensive review of our training of Americans at all levels of education for an increasingly scientific and technological world. Such a review will undoubtedly indicate that changes are required, and we should be prepared to make them. * * * If anything less is accepted as a national objective, then there is cause for alarm.

A similar theme was sounded in a Library of Congress report requested by Congressman Ike Skelton of Missouri, a member of the House Armed Services Committee. Congressman Skelton said that the report raises the spector of a technology gap between the United States and other countries. He concluded that:

> If we can't produce the personnel to operate the technical equipment on which we currently depend and to develop new innovations for both commerce and defense, we will not only jeopardize our economic well being, we will be endangering our national security.

I would like to cite some examples that cause me to be alarmed about our Nation's future scientific and technological base.

Manpower shortages in engineering and computer specialists are contributing to the decline in productivity and the decline in the U.S. share of world trade. Between 1963 and 1977, productivity increased in the manufacturing industries of the United Kingdom by 51 percent, of West Germany by 114 percent, of Japan by 197 percent, and of the United States by 39 percent. During that same time, the U.S. share of world trade in manufactured items declined from 21 percent to 16 percent, while Japan's share increased from 8 percent to 15 percent.

The Department of Defense has reported a shortage of 1,100 engineers in ranks, and a shortfall of 114,000 engineers over the next 10 years.

When talk turns to productivity and technology, Japan is often cited as a model among industrialized nations. The Japanese skills that led to the production of Toyota, Datsun, Sanyo, and Panasonic have their roots in the Japanese classroom. In that classroom, Japanese students spend 25 percent more time on math and science than their American counterparts. Ironically, the Japanese are making widespread use of instructional materials in their math and science curricula which were originally developed under NSF-sponsored education grants.

Against this worldwide background, our Nation's science and engineering education establishment is beset by a range of problems on the one hand, and a precipitous decline in Federal support on the other. You, as well as I, know that our system of science and engineering education is in a state of crisis. What we lack however, is a nationwide commitment and agenda to deal with these problems.

I strongly believe that the National Science Foundation must play a leading role in restoring the health of American science and engineering education.

When the National Science Foundation was established in 1950, it was authorized and directed to "initiate and support basic scientific research and programs * * * and science education programs at all levels." The educational mandate of the National Science Foundation has been an integral part of our Nation's scientific establishment since that time. It was clearly reaffirmed when Congress, in 1979, rejected proposals to move the science education programs out of the National Science Foundation to the newly created Department of Education.

Over the years, the National Science Foundation's proportion of total expenditures for science and engineering education has been very small but its impact has been significant. As an outstanding example of how small amounts of NSF science education funding have had large returns, I cite the fact that the BASIC computer language was developed under a National Science Foundation science education grants.

Now in 1982, this dual mission of the Foundation is being abrogated with the administration's proposals to significantly reduce all education programs. The higher education community, collectively and individually, testified last year before various congressional committees urging the rejection of the administration's plan as a shortsighted and strategic error. We believe that the reasons for the Foundation's charter in science and engineering education remain as valid today as they did in 1950 and that adequate funding for science and engineering education must continue. We believe that the current crisis is very bit as real as it was in the aftermath of Sputnik.

We agreed with the testimony just given by NSTA that the National Science Board report should not be a cause for delay. We should not wait 18 months for this Commission to make its recommendation. We need action by Congress now, and today we call upon the members of the subcommittee to take this action.

What will be the likely long-term effect on our Nation if the science and engineering education programs of the National Science Foundation are eliminated?

First, the size of the pool from which future scientists and engineers will be drawn will be severely reduced. By 1995, the proportion of the total population in the 18 to 24 age range will be 25 percent less than it was in 1980. If, as we approach the end of this century, the number of scientists and engineers is not to decrease in absolute terms—let alone increase to meet what by then will be an increasing industrial and military demand—the proportion of this population prepared for higher education in science and engineering must increase. But if Federal science career motivation programs are cut off, we can expect a smaller proportion, and hence a smaller number of young children to be attracted to science and engineering careers.

Many of those children who do become interested in science when very young will be turned away by the poor quality of science teaching they encounter in their junior and senior high schools. Without Federal help, science and mathematics teaching will be unable to keep current with new developments. Without federally funded in-service institutes, high school science and mathematics teachers will fall further behind in their subjects and their already damaged isolation from ongoing contact with research and the real world of science will be made more complete.

Without Federal assistance, colleges and universities will be unable to upgrade instructional laboratory equipment, introduce important new scientific and educational concepts to undergraduates and, in general, improve the quality and effectiveness of undergraduate science education. Every year this persists will be a year that hastens the increasing shortfall of scientific human resources.

Second, new entrants into the Nation's technical and managerial work force will, in the aggregate, be increasingly underprepared to function effectively. Even now the schools are failing to turn our graduates who can cope with the increasingly technical nature of work in commerce, industry, and the military. To allow the situation to become still worse by withdrawing the only Federal effort that addresses the educational roots of our productivity/security concerns, is to incur enormous national—if not Federal—costs.

Each year that the system fails, the educational national debt grows, ultimately to be paid by the public. Industry and the military must provide science and mathematics education to make up for school failures. To the extent that our business and defense establishments are unable to rectify previous science education failures, productivity lags further, inflation worsens, public costs soar. The effect is cumulative. Each year that we let this program go unattended by national leadership and resources, we mortgage the economy and face the unhappy, totally unnecessary prospect in a few years of either investing in expensive reeducation or paying the price of ill-prepared workers year by year.

If the Federal role in education is now diminished, virtually eliminating NSF involvement, then there is little chance of turning things around. The price we will pay—in terms of scientific career development and a technically competent work force—will be out of proportion to the money saved.

Termination of NSF science education programs will have the most impact in future years, perhaps 5 to 10 years hence, as the GAO report indicates. Education, by its nature, is a long-term investment in people; the benefits associated with improvements in materials and equipment are generally not realized for several years. Conversely, the end of NSF efforts to improve science and engineering education will be felt throughout our system for years after the actual termination.

For example, the B.S. engineer and the Ph. D. scientist of the year 2000 are currently in the first grade. If our system fails to adequately prepare and stimulate these first graders for careers in science and technology, we will face the next century with a severe shortage of technically skilled manpower.

Science education at NSF must be strengthened so that it can be restored as a more effective partner in sharing with State and local agencies and public and private institutions the responsibility for, and costs of, putting science education back on its feet in this country and keeping it there

I thank you for the opportunity to present this testimony and I will be pleased to respond to any questions.

Senator GARN. Thank you.

You note that as a result of the poor quality of science teachers, many students may be "turned off" to science in public schools. I wonder to what extent this is a local school board and school policy issue. It seems to me maybe we are faced with the sort of the chicken or egg situation. Here we don't require our students to take math and science courses as do the Germans and the Russians and, consequently, we have not placed the high priority on attracting teachers in these areas.

Mr. WRIGHT. I think there is clearly a local role. I think that the State boards of education have allowed the science requirements for graduation, and the math requirements in particular, to drop below what is a prudent level. But I am not sure how the Federal Government can address that. I do think the other thing that is equally valid, though, that the quality of the teacher training and the quality of the curriculum material which we look to NSF to provide are also equally important.

Senator GARN. I think we have made a great mistake in the minimum requirements in this area, and I say that from someone who is not technically trained. My degree in college ended up in banking and finance, but when I was in high school I took every science class that was available. This helped my requirement for the Navy's commission regular program which required a lot of physics and chemistry.

The point I wish to make is, even if people are not going into a scientific field, I think a great mistake is made in not having that kind of mental discipline. I think this is a matter of training your mind to thinking in certain ways that is helpful even if you are going into nontechnical, nonscientific background. I never had the occasion directly to use my science and mathematics background specifically but, again, the mental discipline of that kind of training has been incredibly helpful in my thought processes and being able to understand many of the things that go on in today's world.

I think we ought to require that more science and math courses be taught and that we have made a great mistake in not requiring more training in these areas.

Mr. WRIGHT. I quite agree with you.

Senator GARN. Thank you very much. We appreciate your being here today.

[The statement follows:]

STATEMENT OF JOHN WRIGHT, PRESIDENT, UNIVERSITY OF ALABAMA AT HUNTSVILLE

My name is John Wright and I am President of the University of Alabama in Huntsville, a position I have held for approximately four years. Prior to assuming the presidency at UAH, I served as the Chief Academic Officer for the West Virginia Board of Regents and Dean of the College of Arts and Sciences at West Virginia University and at Northern Arizona University. In addition to my administrative roles, I have served on the faculty at West Virginia Wesleyan College, Northern Arizona University, and West Virginia University where I held the rank of Professor of Chemistry. I received a Ph. D. degree in Chemistry from the University of Illinois in 1951 and did post-doctoral work at the University of London in 1962 and at the University of Michigan in 1965. I have also worked as a research scientist for seven years in industry and have been a member of the staff at the National Science Foundation. I have also been a member of the Army Science Board.

I am pleased to have the opportunity to submit testimony to this Committee on the FY 1983 National Science Foundation appropriation bill, with particular emphasis on the Science and Engineering Directorate.

I represent 354 member institutions of the American Association of State Colleges and Universities, and am currently Chairman of its Committee on Science and Technology. My testimony is also supported by the following associations:

American Association of Community and Junior Colleges
American Council on Education
American Educational Research Association
American Psychological Association
Association for the Advancement of Psychology
Association for Affiliated College and University Offices
Association of American Colleges
Association of American Universities
Association of Catholic Colleges and Universities
California State University
Council of Graduate Schools
Council of Independent Colleges
National Association of Independent Colleges and Universities
National Association of Schools and Colleges of the United Methodist Church
National Association of State Universities and Land-Grant Colleges
National Council of Teachers of Mathematics
State University of New York

Our institutions are located throughout the United States, and include Weber State College and Southern Utah State College, as well as four colleges in Connecticut, one in Nevada, three in New Mexico, eighteen in New York, seventeen in Pennsylvania, five in Kentucky, six in Mississippi, nine in Wisconsin, three in Vermont and seven in Tennessee.

With a combined enrollment of over 2½ million students, the 354 state college and universities of AASCU enroll one of four of all baccalaureate degree students in the country. Our institutions award close to 30% of the B. S. degrees in engineering annually. Many students who ultimately pursue advanced degrees in scientific and technical fields receive their basic training at our institutions. A large portion of the nation's future elementary and secondary school science and mathematics teachers are educated at AASCU colleges and universities. These teachers must be able to communicate the knowledge and skills that will enable our youth to live in an increasingly complex and technology-dependent society.

The past year has been an increasingly bleak and frustrating one for those of us interested in, and concerned with, the future scientific and technological strength of the United States. The Administration's decision to cut funding for all science and engineering education programs, with the exception of the graduate fellowships program, is an example of fiscal considerations--reduced budgets--interfering with perceived national goals--adequate supply of scientific and technological manpower.

For this reason, I urge you to reconsider the Administration's budget request for science and engineering education at the National Science Foundation. As a guideline, I would urge you to adopt at least the level of spending contained in the bill H.R. 5842, recently voted upon by the House Science and Technology Committee. The additional sum of money in H.R. 5842 for science and engineering education, $30 million, is far lower than the actual need, but takes into account current budgetary restraints. I would also urge you to distribute additional appropriations among three functional catergories--1) pre college, 2) undergraduate and 3) research in science and engineering education and public understanding programs. The level~~s~~ in H.R. 5842 are necessary if we are to maintain the vestiges of a national system of science and engineering education and to fulfill the dual mandate of the Foundation's charter, research and education

THE CHANGING INTERNATIONAL ENVIRONMENT: THREATS TO U. S. TECHNOLOGY

The proposed cutback in funding for science and engineering education comes at the very time in our history when the U.S.'s position of world leadership in science and technology is being severely challenged. The proposed cuts, we believe, ultimately will jeopardize our national security and economic well-being by undermining American industrial, commercial, and military strengths. D. Allan Bromley, Retiring President of the American Association for the Advancement of Science, recently noted that "to expect scientific and technological progress while abandoning efforts at improving science and technological teaching in our schools is illogical and a disservice to the nation's interests."

The severity of the situation was highlighted in a recent study by SRI International that compared the education and employment of scientists and engineers in the U.S. and the U.S.S.R. Based on its findings the report concludes that "there is a need for concern in the U.S. and that concern should be manifested in a systematic and comprehensive review of our training of Americans at all levels of education for an increasingly scientific and technological world. Such a review will undoubtedly indicate that changes are required, and we should be prepared to make them . . .If anything less is accepted as a national objective, then there is cause for alarm."

A similar theme was sounded in a Library of Congress report requested by Congressman Ike Skelton of Missouri, a member of the House Armed Services Committee. Congressman Skelton said that the report raises the spector of a "technology gap" between the U.S. and other countries. He concluded that "if we can't produce the personnel to operate the technical equipment on which we currently depend and to develop new innovations for both commerce and defense, we will not only jeopardize our economic well being, we will be endangering our national security." I would like to cite some examples that cause me to be alarmed about our nation's future scientific and technological base.

- Manpower shortages in engineering and computer specialists are contributing to the decline in productivity and the decline in U.S. share of world trade. Between 1963 and 1977 productivity increased in the manufacturing industries of the United Kingdom by 51%, of West Germany by 114%, of Japan by 197%, and of the United States by 39%. During that same time the U.S. share of world trade in manufactured items declined from 21% to 16%, while Japan's share increased from 8% to 15%.
- The Department of Defense reports that it has problems recruiting and retaining civilian and military engineers; the Air Force reports a shortage of 1,100 engineers in ranks, and a shortfall of 114,000 engineers over the next ten years. It also notes that it is more and more difficult to find officers and NCO's who are qualified to be trained to operate increasingly sophisticated military hardware.
- In Japan the number of degrees granted to engineers in recent years has surpassed the number granted in those same years in the U.S., though Japan's population is one-half of ours. The Soviet Union graduates more than twice as many scientists and engineers as does the U.S. and has almost five times as many engineering students. The U.S. ranks third behind the Soviet Union and Japan in the proportion of engineering graduates in the population.
- About 1.4 million scientists and engineers will be needed to fill growth and replacement demands by 1990.

When talk turns to productivity and technology, Japan is often cited as a model among industrialized nations. The Japanese skills that led to the production of Toyota, Datsun, Sanyo and Panasonic have their roots in the Japanese classroom. In that classroom, Japanese students spend 25% more time on math and science than their American counterparts. Ironically, the Japanese are making widespread use of instructional materials in their math and science curricula which were originally developed under NSF sponsored education grants

Against this worldwide background, our nation's science and engineering education establishment is beset by a range of problems, on the one hand, and a precipitous decline in Federal support, on the other. You, as well as I, know that our system of science and engineering education is in a state of crisis. What we lack however, is a nationwide commitment and agenda to deal with these problems.

THE ROLE OF THE NATIONAL SCIENCE FOUNDATION

I strongly believe that the National Science Foundation must play a leading role in restoring the health of American science and engineering education.

When the National Science Foundation was established in 1950, it was authorized and directed to "initiate and support basic scientific research and programs . . . and science education programs at all levels." The educational mandate of the National Science Foundation has been an integral part of our nation's scientific establishment since that time. It was clearly reaffirmed when Congress in 1979 rejected proposals to move the science education programs out of the National Science Foundation to the newly created Department of Education.

Over the years, the National Science Foundation's proportion of total expenditures for science and engineering education has been very small--but its impact has been significant. As an outstanding example of how small amounts of NSF science education funding have had large returns, I cite the fact that the "BASIC" computer language was developed under a National Science Foundation science education grants.

Now in 1982, this dual mission of the Foundation is being abrogated with the Administration's proposals to significantly reduce all education programs. The higher education community, collectively and individually, testified last year before various Congressional committees urging the rejection of the Administration's plan as a snortsighted and strategic error. We believe that the reasons for the Foundation's charter in science and engineering education remain as valid today as they did in 1950 and that adequate funding for science and engineering education must continue. We believe that the current crisis is every bit as real as it was in the aftermath of Sputnik.

We were somewhat encouraged last year by Congressional decisions that restored limited amounts of funds for the National Science Foundation to conduct the education programs that are mandated in its charter. The need for science and engineering education programs is great, yet the monetary resources available this year (a little over $20 million) will be disproportionate to that need. For example, NSF estimated that 2,200 new grants that it would have made will not be awarded in FY 1982 due to lack of funds. I urge Congress to once again reject the Administration's FY 1983 plan to eliminate all science and education programs, except fellowships, and to provide funding for a range of education activities at the Foundation

What role should the National Science Foundation play in correcting the disparity between available resources and perceived needs? One approach would be for a clear and unequivocal call for increased funding of science and engineering education programs. Such a call coming from an eminent group of scientists would serve to dramatize the problems at hand and the range of solutions necessary to deal with them.

In contrast, however, the National Science Board established a special Commission on Precollege Education in Math, Science and Technology. For the record, I would like to introduce a letter written by Allan W. Ostar to the NSF expressing our concerns with this approach.

We do not need a Commission to study a problem, the dimensions of which are already clear. We should not wait 18 months for this Commissions to make its recommendations. We need action by Congress now so that American science and engineering education may be restored to a system of excellence. We need a Congress that will take this action and support science and engineering education in our schools, colleges and universities with adequate levels of funding. We call upon the members of the Subcommittee to take this action today.

THE REDUCTION OF SCIENCE AND ENGINEERING EDUCATION FUNDING: ITS EFFECT

What will be the likely long-term effect on our nation if the science and engineering education programs of the National Science Foundation are eliminated?

First, the size of the pool from which future scientists and engineers will be drawn will be severely reduced. By 1995 the proportion of the total population in the 18-24 age range will be 25 percent less than it was in 1980. If, as we approach the end of this century, the number of scientists and engineers is not to decrease in absolute terms--let alone increase to meet what by then will be an increasing industrial and military demand--the proportion of this population prepared for higher education in science and engineering must increase. But if federal science career motivation programs are cut off, we can expect a smaller proportion, and hence a smaller number of young children to be attracted to science and engineering careers.

Many of those children who do become interested in science when very young will be turned away by the poor quality of science teaching they encounter in their junior and senior high schools. Without federal help science and mathematics teaching will be unable to keep current with new developments. Without federally funded in-service institutes, high school science and mathematics teacher will fall further behind in their subjects, and their already damaged isolation from ongoing contact with research and the real world of science will be made more complete. Without federal assistance colleges and universities will be unable to upgrade instructional laboratory equipment, introduce important new scientific and educational concepts to undergraduates and, in general, improve the quality and effectiveness of undergraduate science education. Every year this persists will be a year that hastens the increasing shortfall of scientific human resources.

Second, new entrants into the nation's technical and managerial work force will, in the aggregate, be increasingly underprepared to function effectively. Even now the schools are failing to turn out graduates who can cope with the increasingly technical nature of work in commerce, industry, and the military. To allow the situation to become still worse by withdrawing the only federal effort that addresses the educational roots of our productivity/security concerns, is to incur enormous national (if not federal) costs. Each year that the system fails, the "educational national debt" grows, ultimately to be paid by the public. Industry and the military must provide science and mathematics education to make up for school failures. To the extent that our business and defense establishments are unable to rectify previous science education failures, productivity lags further, inflation worsens, public costs soar. The effect is cumulative. Each year that we let this problem go unattended by national leadership and resources, we mortgage the economy, and face the unhappy, totally unecessary prospect in a few years of either investing in expensive "re-education" or paying the price of ill-prepared workers year after year.

If the federal role in education is now diminished virtually eliminating NSF involvement, then there is little chance of turning things around. The price we will pay--in terms of scientific career development and a technically competent workforce--will be out of proportion to the money saved.

The General Accounting Office recently completed a report on The Impact of Budget Cuts on Three Directorates of the National Science Foundation. NSF officials interviewed for this study concluded that the "elimination of science and engineering education programs will harm the future ability of educators to provide students at all levels with the advanced knowledge and training they will need in order to function fully as members of a rapidly advancing technological society."

Termination of NSF Science education programs will have "the most impact in future years, perhaps 5 to 10 years hence," as the GAO report indicates. Education, by its nature, is a long term investment in people; the benefits associated with improvements in materials and equipment are generally not realized for several years. Conversely, the end of NSF efforts to improve science and engineering education will be felt throughout our system for years after the actual termination.

For example, the B. S. engineer and the Ph. D scientist of the year 2000 are currently in the first grade. If our system fails to adequately prepare and stimulate these first graders for careers in science and technology, we will face the next century with a severe shortage of technically skilled manpower.

The present crisis presents the best opportunity that has existed in several years to refocus and sharpen the NSF effort. However, it would be unwise, and inefficient, to phase out all NSF science and engineering activities while this reconceptualization is taking place. Momentum would be lost, valuable programs interrupted, talent dispersed, and attention diverted to the logistics of phasing out the budget, facilities and personnel of a doomed enterprise. In this regard, the recent reorganization of the Science and Engineering Education Directorate into an Office of Scientific and Engineering Personnel and Education is particularly regrettable.

Science education at NSF must be strengthened so that it can be restored as a more effective partner in sharing with state and local agencies and public and private institutions the responsibility for, and costs of, putting science education back on its feet in this country and keeping it there. In order to achieve such a revitalization it will be important for certain problems to be dealt with thoughtfully and imaginatively by the NSF, the National Science Board, OMB and Congress.

In this regard, the House Committee on Science and Technology in its report, H.R. 97-485, has asked NSF to submit its plan for a revitalized science and engineering program by October 15, 1982. Though we are opposed to any delays, I would hope that your Committee will also ask for such a plan within this timetable so that the agency might proceed with improvements in our nation's science and engineering education system.

Recently, AASCU surveyed its membership to learn how science and engineering education cuts would affect course offering in these areas. I include for your information in the attached appendix a summary of these comments. Without an exception, the institutions agreed that it would be extremely difficult to continue to offer those science and engineering education courses that had been previously supported by NSF.

I thank you for the opportunity to present this testimony to you. I would be pleased to respond to any questions that you might have.

LETTER FROM ALLAN W. OSTAR, PRESIDENT, AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

January 15, 1982

Mr. John B. Talmadge
Chairman, Ad Hoc Planning Group
NSB Special Commission on Science
and Engineering Education
National Science Foundation
Washington, DC 20550

Dear Mr. Talmadge:

The American Association of State Colleges and Universities appreciates the opportunity to respond to the National Science Board's proposed plan to establish a Special Commission on Science and Engineering Education.

The past year has been an increasingly bleak and frustrating one for those of us interested in, and concerned with, the future scientific and technological strength of the United States. The Administration's decision to cut funding for all science and engineering education programs, with the exception of the graduate fellowships program, is an example of fiscal considerations--reduced budgets--interfering with perceived national goals--adequate supply of scientific manpower. We were somewhat encouraged by Congressional decisions that restored some limited amount of funds for the National Science Foundation to conduct the education programs that are mandated in its charter. The need for science and engineering education programs is great, yet the monetary resources available this year will be disproportionate to that need.

What role should the National Science Foundation and the National Science Board play in correcting this disparity between available resources and perceived needs? One approach would be for a clear and unequivocal call for increased funding of science and engineering education programs. Such a call coming from an eminent group of scientists and national leaders would serve to dramatize the problems at hand and the range of solutions necessary to deal with them. In contrast, however, the Foundation and the Board have selected an approach that will result in little concrete improvements in our scientific education system.

There are two reasons why the proposed Commission will fail to adequately address what is rapidly becoming a critical situation.

First, the proposed scope of activites and focus of the Commission does not recognize that our educational system is a system. To isolate and examine secondary school education without paying equal attention to primary and higher education ignores the fact that all parts of the American educational complex are interrelated.

The situation in our secondary schools is, indeed critical, but it cannot fruitfully be examined without considering the problems that precede the secondary school. Students at the elementary school level must be adequately prepared in mathematical skills and thinking, and sufficiently motivated and inspired in the sciences. If not, they will arrive in the secondary schools without the proper foundations or interests to pursue more advanced scientific and mathematical courses. In that sense, a Commission which concentrates its efforts on the secondary schools is entering the process six or seven years too late.

By focusing on the secondary schools the proposed plan also ignores the relation that higher education bears to the other educational components. With the removal of federal assistance to colleges and universities, secondary school graduates will find themselves entering higher education institutions with inadequate laboratories and out-of-date curriculum. Higher education's role in training elementary and secondary school teachers, initially and later through in-service and summer institutes, has been an important one. The Commission's approach fails to recognize this training relationship.

One problem in the teacher training system--the problem of attracting and retaining teachers when industrial opportunities and salaries are more attractive--seriously threatens to erode the quality of elementary and secondary school science teachers. The proposed Commission model will be able to do little more than note these trends.

Second, the proposed Commission plans to solve a national problem by local efforts and with local resources. The Statement on NSF Activities in Science and Engineering Education as adopted by the NSB at its 228th Meeting on August 20-21, 1981, states that, "The U. S. requires an educational system equal to its needs and opportunities in science and technology. The NSB is gravely concerned that the Nation is far less well prepared to meet the needs and challenges of the future than is necessary . . ." Throughout this and other supporting documents it is clearly recognized that our scientific educational system and its deficiencies are national problems.

In the Rationale for the Commission it is stated that "in most countries this concern of maintaining science and technology has led to a vigorous effort to upgrade and focus education programs." One only has to look at the systems, and the successes, of two of our industrial competitors in the world market--Japan and West Germany--to understand how the infusion of monetary support and national attention has resulted in a scientific educational system far superior to ours. The Rationale continues by stating that the diversity of our educational system complicates such an approach since problems must be "solved primarily at the level of the local school system."

The message conveyed by this approach is that national leaders will examine national problems, make recommendations, and coordinate activities . . . all this to be done with local dollars. How the local school districts will provide these dollars is unclear. These localities are experiencing severe fiscal constraints which will hamper their efforts.

In your letter of December 29, 1981, you observed that the "Commission's actions have the potential for having more impact than its final report." We agree with that observation and hope that the Commission will act in accordance with our recommendations.

The Association, its staff and member institutions, pledge their cooperation in helping you to formulate an action plan that will begin to solve the inadequacies in Science and Engineering education. Without such action our nation's economic strength, technological base, and military security will ultimately be threatened.

Sincerely,

Allan W. Ostar
President

AMERICAN ASSOCIATION OF STATE COLLEGES
AND UNIVERSITIES

INSTITUTIONAL COMMENT ON THE IMPACT OF SCIENCE EDUCATION

North Carolina Central University:

Under an earlier LOCI grant, they developed a set of computer-assisted homework exercises for Introductory Sociology. The concept was to give sociology students laboratory experience in a similar manner to students in the biological and physical sciences where the laboratory begins in the introductory course. The lessons, called Programs from Introductory Sociology (PROFITS), were referred and accepted for distribution by CONDUIT, and are in use at over 100 institutions of higher education in the United States.

At NCCU under a second LOCI grant, they developed computer-assisted homework lessons for teaching sociological statistics. These nine lessons, having been student-tested for three years, are now ready for review and testing by CONDUIT, which has asked to review them. The lessons, called CASE (Computer-Assisted Sociological Exercises), have been used to aid 50 black students at NCCU over a three-year period. Again, national distribution is expected.

State University College at Buffalo:

In a concentrated, six-week summer program 24 high-ability Western New York high school juniors learned how to develop an environmental impact statement and then prepared such a study of a Buffalo area site.

Called by the Buffalo Evening News environmental news editor "one of the best and most complete assessments of Times Beach," the extensive student report would have cost the city at least $50,000 had a professional firm prepared it. Total cost of the educational project was the $17,550 NSF grant, which paid three Colleges at Buffalo faculty, provided supplies and honoraria for 11 special speakers, and supplied a $2 per day commuter allowance for the high school participants. Other costs, such as those for college computer services, were absorbed by the college.

For three weeks the students studied two local case histories--the Love Canal leaking of industrial toxic waste and the West Valley nuclear fuel reprocessing plant--and learned ecological principles and methodologies. The final three weeks were spent in the on-site study of Times Beach. Oral and written presentations of their findings and recommendations were made by the students to a panel of city officials, educators, and ecological specialists.

For at least 16 years National Science Foundation teacher-training programs have been conducted at the college, and 18 programs have been directed by a professor of chemistry, who most recently supervised a four-week, summer '81 workshop on "Physical Chemistry for Secondary School Teachers of the Biological Sciences."

Revolutionary advances in biological knowledge having come largely from chemists exploring complex structures at both the cellular and sub-cellular levels of organization, it has become essential for biology teachers to be throughly familiar with the principles of physical chemistry. Accordingly this course, taught to 30 Western New York teachers in grades 9-12 by three faculty with expertise in molecular biochemistry, physical chemistry, and biological principles, was proposed and received a $13,404 NSF grant. The college provided all classroom space and laboratory equipment.

The summer program was reinforced throughout the following academic year by faculty visits to the teachers' schools as often as requested.

The value of providing science teachers with such opportunities to increase and update their knowledge is evident considering that the current New York State Biology Syllabus contains topics in molecular biology that require a deeper understanding of chemistry principles than ever before, yet few NYS biology teacher-training programs require a course in physical chemistry.

Recognizing the increasing need for computer literacy, the College at Buffalo has embarked on a two-year project to develop five instructional modules whose focus is an interactive computer simulation of an environmental issue.

The module subject areas are population, energy, air and water pollution, toxic and hazardous waste, endangered species, and land use for undergraduate environmental science courses.

In the grant proposal that received a NSF $26,720 award and that also has State University of New York support amounting to $13,134, the college pointed out that students taking computer-enriched courses will benefit in several ways. Using the computer to simulate complex systems will increase insight into the nature of such systems and will afford the non-science major an increasingly wanted opportunity for firsthand experience with a computer.

University of Northern Iowa:

A possible casualty if the cuts are made is a one-of-a-kind program in Iowa that has reached almost 600 elementary and secondary school teachers throughout the state. The Pre-College Teacher Development Program is unique in that it offers a wide selection of short courses to give math and science teachers a look at new developments in science and refresher courses in basic science.

UNI faculty members go to outlying areas to teach the courses which include such topics as the body and drugs, energy concepts, microcomputers and hand-held calculators.

Tennessee Tech University

In the fall of 1981, for example, Tennessee Tech's electrical engineering department received a $30,000 Local Course Improvement grant to purchase component parts to build portable digital lab stations for use in student experiments, expanding the curriculum in digital systems design. The university provided an additional $23,000 plus release time for two faculty members to work on the project and design course material for use with the stations. About 150 students will benefit from the program each year.

A $144,000 NSF Comprehensive Assistance to Undergraduate Science Education (CAUSE) grant received in fiscal 1980 was used in the development of an undergraduate interdisciplinary real-time digital system program. The university added $74,000 to the grant amount. The three-year interdisciplinary project involves six engineering departments and four non-engineering departments--biology, earth sciences, chemistry, and computer science. In the past, students had been unable to do real-time computer work due to the cost of standard computer equipment. The project has permitted the development and acquisition of four "stand alone" microcomputer systems at about one-tenth of the cost of standard systems. The laboratory will permit undergraduate students to learn data acquisition systems currently used by large processing industries.

Northeastern Illinois University

In 1977, funding in the amount of $50,000 was received by the Department of Geography and Environmental Studies for the training of 30 Chicago-area secondary school teachers in remote sensing principles (the use of photographs of the earth which are taken from satellites and on space missions) and their applications.

In 1977, funding in the amount of $5,000 was received and matched by an equal sum from Northeastern for the purchase of introductory electronics equipment for the Physics II laboratory.

In 1979, the Department of Biology received a grant of $11,300 which was matched by an equal sum from the university for the purchase of a variety of equipment which allows a class of 24 students to conduct individual experiments utilizing the physiograph, a versatile instrument which provides the capability of studying a wide range of standard physiological phenomena in human and laboratory animals.

Since the equipment was acquired, approximately 360 students have taken Vertebrate Physiology, the course for which the equipment was purchased.

Appalachian State University

The general objective of the project is to provide mathematical modeling experiences for undergraduates at Appalachian State University in the mathematical and physical sciences; where real work problems are presented in non-mathematical terms, the mathematical formulation by the student is emphasized problems considered invite solution attempts based on a variety of mathematical techniques and approaches, the time frame for problem solution is suitable for local needs, and studies are suitable for results of "solutions" to be presented in written project reports.

This proposal seeks funding in the amount of $22,114 to design, implement and evaluate a new course for prospective middle school teachers. The course will teach basic physics and astronomy, and the key feature will be the use of inexpensive "string and sticky tape" laboratory equipment and demonstration throughout. The purpose will be to develop student confidence in their ability to develop, and utilize in their later teaching, an abundance of laboratory experiences which cost very little. The experiments will be devised from materials commonly available from any household, supplemented with very inexpensive commercial materials. Typcially, a middle school teacher in the public schools has virtually no science budget, and this course will prepare teachers to cope with that reality. A second purpose is to give these teachers a positive feeling about science, brought about by their own success and confidence in doing physics with simple equipment. This positive feeling will, in turn, be passed on to their students.

This proposal requests funds for the acquisition of components of a nuclear radiation spectrometer system to upgrade several upper level undergraduate courses in the area of radiation detection and measurement.

The proposed equipment will be used to continued the improvement of our senior level experimental physics course, to facilitate the expansion of our junior level radiation physics course, and to help establish a meaningful laboratory component in our senior level medical physics course.

Stockton State College

Thank you for your request for information about the effect of NSF science education programs on Stockton State College and the South Jersey community. South Jersey is a rural environment and Stockton State College is the four-year school within about 50 miles. As such it is an important resource to the community. Stockton has received a variety of NSF science education grants in the past.

In previous years, Stockton received funds for the training of secondary school teachers in the local rural area. These teachers were given instructions by the Stockton faculty enabling them to become aware of changes in their disciplines. They were then able to bring this information back to their high schools with them.

Stockton was founded only ten years ago and a very small fraction of the population in this area is college educated. The college has been having substantial impact on the community and NSF Science Education funding has been part of that impact.

NSF Science Education funds were also used for equipment purchases and course improvement. These funds substantially changed our course offerings in physics and enabled us to do a better job in training our students.

Sam Houston State University

Dr. John R. Hilliard, Jr., professor of Life Sciences, directed the program for secondary level science teachers. It totaled $33,157, with 43 participants. Twenty-six schools in 16 different school districts were represented.

"Growing out of this project, six large and ambitious projects in developing wooded areas on school property into outdoor learning centers were initiated and are now being used in instructional programs," says Hilliard.

The project lasted from August, 1977 to May, 1979.

"The investment of an average of $800 in taxpayers funds per participant for funding the overall program has resulted in a widespread influence in improved science education in southeast Texas," says Hilliard.

Dr. Paul A. Loeffler taught in the program for junior high students. He explains the necessity for the program:

"The program was developed to address a problem that exists in, but which is not unique to, East Texas. Many of the area school districts are small rural districts that are generally poorly funded and which, therefore, cannot provide adequate teachers or facilities necessary for satisfactory science training.

"The resultant limited exposure to adequate science training, particularly at the junior high level, often channels students away from later science training and possible careers in science.

"Furthermore, since the enrollment of these districts include a substantial percentage of minorities and disadvantaged youth, a disproportionate number of minorities and disadvantaged students are inadvertently guided away from the sciences."

"This program is very effective in inspiring young students to select the pre-college science curriculum that will allow them to grow as tomorrow's scientists," he said.

University of Nebraska at Omaha

Dr. John Karloff, associate professor of Mathematics and Computer Science. Dr. Karloff is presently the recipient of a fellowship to the State University of New York at Stony Brook and Brookhaven National Laboratory as a NSF Faculty development visitor. The goal of Dr. Karlof's fellowship is to develop an expanded department of Applied Mathematics at U.N.O.

> "Since there is a shortage of applied mathematics professors and a large demand for applied mathematics college graduates, completion of the program should improve the capabilities of my students in meeting current employment requirements."

In citing the needs of current employment, Dr. Karlof predicts the usage of the program he develops in training seminars for local business. Funding for the seminars would be needed and further Applied studies would also need financial assistance. Dr. Karlof feels most strongly that the budget elimination of Science and Engineering Education programs would have a detrimental effect on the less wealthy institutions.

California State University, Northridge

During academic year 1980-81 at CSUN, the "Women in Science and Engineering" program, funded in part through a NSF education directorate grant, recruited, retrained and placed in professional engineering apprenticeships, 52 women who had been out of the scientific labor force for many years.

Participating industry sponsors in that program have included: The Aerospace Corporation; Bunker Ramo Corporation, Electronic Systems; General Motors Assembly Division; Grumman Aerospace Corporation, Pt. Mugu; Hughes Aircraft, Missile Systems Group; Litton Data Systems; Lockheed California Company, Burbank; Northrop Corporation, Electronics Division; Rockwell International, Energy Systems Group; and TRW, Inc., Defense and Space Systems Group.

University of Montevallo

-- At least 300 Alabama high school teachers upgraded their classroom skills through the Pre-College Science Teachers Programs and the College Science Improvement Programs at the University of Montevallo. One of the programs was conducted ten summers. When the program began in the early 1960s, many Alabama high school chemistry teachers were not certified in the specialty because of a shortage of teachers. The program prepared them for their teaching assignments and encouraged them to earn their master's degrees. Ironically, when a public junior college system opened in the mid and late 1960s, the newly trained high school chemistry teachers became the new junior college chemistry teachers.

Southwest Texas State University

To provide funds to buy equipment necessary for establishment of a first-rate Plant Econogy course and to modernize pre-existing plant anatomy and biometry courses.

The plant ecology program is established and will continue to be funded by the Biology Department. Plant Anatomy and Plant Ecology courses will be continued. Without NSF funding, none of these courses could have been equipped as well as they now are with modern equipment.

This grant enabled the Chemistry Department to buy a research chromotography instrument that could not have otherwise been purchased. This purchase allows Dr. W. Rudzinski to conduct research with an instrument with unique capabilities. It further released equipment of lower capability for graduate and undergraduate instruction that would not have been feasible if Dr. Rudzinski would have continued to use the pre-existing department equipment.

State University of New York College at Brockport

At the State University of New York College at Brockport, $321,915 in National Science Foundation grants have made possible projects in chemistry, earth sciences, and mathematics/computer science.

A total of 40 faculty members, 8,545 students in natural science courses, and more than 6,000 community members have benefitted from these grants. (The 184 science and college level teachers attending a Brockport science education program each have about 35 students in their class for a total community population of 6,440.)

NSF provided $258,773 for Project CAUSE - Comprehensive Assistance to Under-graduate Science Education. This grant made it possible for Brockport to host a conference on microcomputers in higher education that was attended by 142 professionals in higher education, secondary education and business. The conference helped advance the state of the art in undergraduate instruction using computer technology in several disciplines. The proposal identified 2,900 people per year who will receive instruction under this particular NSF grant.

Western Oregon State College

Western Oregon State College received a NSF CAUSE (Computer Assistance to Undergraduate Science Education) grant in May 1980 for a three-year program emphasizing "Infusion of Computer Science into Liberal Arts and Teacher Education." We are completing the second year of the grant, and we expect the funding to continue for a third year.

Goals of our program include expanding student exposure to computers; expanding faculty knowledge and use of computers; adding an introductory course in computer literacy for the general student; establishing an academic computer laboratory; and developing the curriculum for a minor program in computer science.

So far, 23 faculty members have participated in the program and have received training in ways to introduce use of computers into their regular courses. Projects have been developed in a wide range of disciplines, including mathematics, chemistry, physics, economics, psychology, language, music, education, biology, geology, social science, physical education, library, and dance.

More than 500 students so far have benefitted from the introduction of computer instruction in such areas. Ten more faculty members are scheduled to receive training this coming summer.

Courses have been added in computer literacy and computer programming and more than 600 students have participated in these courses. College administrators are currently considering introducing computer literacy into the required core curriculum for all college students.

CAUSE grant funds have allowed us to add a computer laboratory that contains 11 APPLE II microcomputers available for use by faculty and students. Progress also is underway in developing a computer science minor for our curriculum.

Overall, then, the NSF grant has helped WOSC make great strides in bringing computers to our students. Because we have traditionally been a teacher education institution (60 percent of our students major in education), we expect the benefits of the CAUSE grant to have long lasting effects upon the future teachers we are training. Special applications for computers in secondary education and special education are being explored by faculty on our campus.

Georgia State University

Our Department of Chemistry has been supported by the NSF Science education program CAUSE. This support was used to develop a computer-assisted instructional center for undergraduate chemistry students at the university.

The center consists of 30 micro-computers now in place in the Chemistry Department. It is used as an auto-tutorial system enabling large numbers of students to deal directly with a computer in solving chemistry problems in their study of the subject.

Approximately two-thirds of the funds for the center came from NSF, and the remaining one-third from university sources.

Clarion State College

Since 1969 Clarion State College, Clarion, Pennsylvania has received numerous grants from the National Science Foundation for the purpose of improving science education. Most grant programs have been designed to provide inservice education experiences for teachers of science at the elementary, middle and junior high school, and high school levels. The topics have included elementary science curriculum innovations, environmental science, and human biology. Additional NSF programs designed to disseminate innovations in science education have also been presented by the college. These have included the dissemination of science curricula for the junior high school and curricula in the environmental sciences and, most recently, a program designed to promote science among elementary school principals.

Approximately 600 teachers and school administrators have been directly involved as participants in these science programs. Many more have benefitted by the "trickle-down" effect.

The college has found past programs to be very beneficial in meeting the needs of middle grade teachers of science. The individuals, teachers, and administrators that have participated in past programs have communicated positive perceptions concerning the planning, organization, and presentation of the activities that they experienced. The follow-up services and interest provided by the college personnel have proved extremely valuable to our district personnel during the implementation of the ideas generated during their participation.

A healthy respect for federally funded programs has been developed, through willingness to become involved.

During the past several years, Clarion State College has provided valuable and varied in-service programs for their district, with many teachers participating.

In the past several years, Clarion State College has provided a number of valuable educational experiences in the sciences for teachers in Western Pennsylvania. These programs have been possible due to financial support from the National Science Foundation and by the excellent cooperation of concerned teachers.

Clarion State College has done tremendous work in the preparation of teachers for science education. This is and has been possible because of the dedicated teachers and the monetary support of the National Science Foundation. The students and teachers have benefitted greatly from programs such as these.

The college has made a major contribution to the Otto-Eldred Schools in two ways. The Clarion graduates employed by this district have excellent backgrounds in science due to the high quality of college preparatory courses. Secondly, the in-service programs provided by Clarion have been practical, pertinent, and have led to positive student and teacher attitudes toward science.

The National Science Foundation could assist Clarion in having a broad impast upon teachers, pupils and the community in general concerning a heightened awareness of one's responsibility for human biology. It is hoped that funding will be made, and that the local schools will be enabled to provit by future in-service.

Over the last several years, at least 40 teachers from the North Hills District have had the benefit of working with the Clarion staff in developing science curriculum for their district. The staff has been instrumental in developing the elementary science program and has had programs for middle school and high school teachers. There has been very good cooperation in assisting the district in the development and implementation of the sciences program.

The Oil City Area School District also supports the inservice proposal for reasons of past experience with Clarion State College. NSF programs in the past have been carried out with enthusiasm and efficiency. Teachers and administrators have participated and the Oil City students have definitely benefited.

During the various training projects, teachers have learned to design learning environments for hands-on experiencing by children; teachers have become more willing to individualize instruction and to try laboratory activities; teachers have increased their competence with science content, and teachers have been motivated to present science lessons to their students.

Overall experience with other NSF programs administered by Clarion State College has been most positive. Some of the teachers have availed themselves of the opportunity to improve their own teaching strategies. Since many teachers find continuing education to be financially difficult, finding funding sources is of utmost importance so that science teachers may have the opportunity to continue to grow professionally.

The potential impact of a project such as that on Human Biology for teachers of science in grades 5 through 8, could be tremendous. It would impact on teachers, pupils, parents and the community in general. In isolated Appalachian regions, Clarion State College has been instrumental in providing many quality science programs for the teachers, administrators and pupils. The programs have provided improved science curricula, teacher in-service programs and technical assistance. These services would have been impossible without the many successful science grants and excellent leadership available.

Oakland University

Three recent NSF grants that have helped the Department of Chemistry to keep its curricular offerings reasonably up to date: The RULE grant provided funds to offer improved upper level laboratories and to train faculty to permit the introduction of courses in industrial chemistry and polymer chemistry. The ISEP grant was the latest of a series of NSF Instructional Scientific Equipment grants that the department has received. This particular grant enabled them to add experiments involving thermal analysis to several laboratory courses. The CAUSE grant was as the program title implies, a comprehensive program to improve every aspect of undergraduate chemistry instruction. The net effect of NSF support to this department cannot be over estimated. Oakland University has essentially been able to buy $2 worth of equipment for every $1 of state money. As you know, modern equipment is essential for the training of chemists. Such equipment not only continues to increase in cost but has a useful lifetime of five to eight years. Many of the major equipment items are approaching or have passed their expected life times at the university. Without future NSF support to replace obsolete or wornout items, and add newly developed equipment, other sources of funds will have to be found or the training of future chemists at Oakland University will slowly decline in quality.

The University of North Carolina at Charlotte

The Chemistry Department received a Liquid Chromatograph for undergraduate instruction at a cost of $12,250. The number of students benefited annually is 168.

Under an Urban Environmental Studies Project funded thorugh a $16,942 grant, the university provided an enrichment opportunity for 25 gifted 11th grade students who studied at the university on weekends while still in school. They learned about some of the contemporary problems of cities and studied possible solutions. That program is terminating.

The College of Engineering sponsored a program to encourage undergraduate research through a grant of $15,176. That program is terminating. Five engineering students engaged in research through the program.

A $17,946 grant supported a program to strengthen and update junior and senior high school physical science teachers in the Charlotte area. Some 20 teachers participated. The future of that program would be in doubt without the funding.

STATEMENT OF DAVID V. B. BRITT, SENIOR VICE PRESIDENT OF CORPORATE AFFAIRS, CHILDREN'S TELEVISION WORKSHOP

Senator GARN. Next I would like to call Mr. David Britt, senior vice president of corporate affairs, Children's Television Workshop.

Mr. Britt, we are happy to welcome you here today.

Mr. BRITT. Thank you, Mr. Chairman.

I am David Britt, senior vice president of corporate affairs, Children's Television Workshop, producer of Sesame Street.

I would like to file my statement for the record.

Senator GARN. All of my children would like to thank you for Sesame Street. My youngest child is 3 and he is totally captured by Sesame Street.

Mr. BRITT. That is good. That is our intent.

Senator GARN. I didn't recognize Ernie the other day and it is terrible when a 3-year-old thinks you are stupid and said, "That is Ernie, dad."

Mr. BRITT. If you watch once a week you will be able to keep up.

I would like to speak today on behalf of the NSF appropriation for science education and public understanding of science. Part of our support of these appropriations by this subcommittee and others has made possible broadcast of 3–2–1 Contact, a daily educational television series on science and technology for children 8 to 12. We produced 65 programs in this series in 1979 and are about to produce 40 more for season two. We had planned to do a full 65-program series in order to complete a 130-program library, but, despite 2 years of work, we have been unable to raise additional corporate support to do it.

There is no disagreement on the problem The statistical evidence is clear; it has been supported in the last month by the President, by Secretary Weinberger, Secretary Bell, the president of the National Academy of Science, Frank Press, who recently noted the country is in danger of raising a new generation of Americans scientifically illiterate. This bleak picture is getting worse and getting worse fast. Faced with a shrinking budget, our schools are compelled to even lower priority of science because it is not considered education basic.

Science is basic to our lives and getting more so every day. To maintain its technological leadership, Amerca must attract more citizens and more children to science and technology. And the evidence is clear; they must be attracted in an early age, and the evidence is equally clear the opposite is happening. We need a major and sustained effort to rekindle science and technology education. Television can play an important role in support of what goes on in the school. It reaches audiences of millions at home. Its impact goes beyond industry to outreach, to magazines like 3–2–1 Contact that we publish every month and sell 300,000 copies of.

The children are interested; they are not getting the training. In four broadcast runs, 3–2–1 Contact has reached 450 million individual viewings. That translates to a cost per program viewed of less than 2 cents. In our view, that is very good cost investment for the Federal Government to make, one which would be impossible from the local level or State level.

That brings me to the point on which there is disagreement. There is speculation that corporations will replace government in support of science education. It won't happen. And especially won't happen in children television programs in science.

Corporations and their stockholders can't see the connection between their own interest and education of grade schoolers who won't come into the market for 10 or 15 years. The hard fact is, we, as a nation, are under an obligation to NSF for grade schools. Millions of children will continue to be voluntarily turned off to these fields before they ever get any form of instructions. Other nations, in Europe and Asia, have made a different choice. We can see the results from subway cars to computer shipments.

NSF stands as the only funding source directly related to this fuel. Without such a source, this country's achievement in science and technology will continue to decline.

Mr. Chairman, children are this Nation's vital national resource. We all know that kids can't vote. They don't have an organized lobby group, they must rely on this subcommittee and the Congress to represent their interest. I urge you to continue to do so as you have done so well in the past.

Thank you.

Senator GARN. Thank you.

To what extent do you believe that programs like 3-2-1 Contact represent areas of science education that are uniquely suitable for Federal funding?

Mr. BRITT. I think, sir, that they represent an opportunity which is hard to duplicate at a local level. The cost of producing a series like 3-2-1 Contact in absolute terms is very large, you could do 65 shows for close to $9 million, that is beyond the reach of most local budgets, and most State budgets as far as that goes, and yet at a national level, it can reach an audience in every State, every local school district, it can be used by every school and I think that is where the cost effectiveness of broadcast television becomes particularly relevant. This is not regarded as a science curriculum, it is really designed to encourage children who are naturally scientists up until about the age of 7 or 8 to maintain their interest and maintain their commitment about things scientific. Really to do the job to keep them interested until they can get the formal science education, and I think that is the job that really can't be done any other way except through Federal support.

Senator GARN. Thank you very much. We appreciate your testimony.

[The statement follows:]

STATEMENT OF DAVID V. B. BRITT, SENIOR VICE PRESIDENT OF CORPORATE AFFAIRS, CHILDREN'S TELEVISION WORKSHOP

Thank you for the opportunity to appear before you today. I am here to urge you and your Subcommittee to appropriate an adequate level of funds for fiscal year 1983, to enable the National Science Foundation to continue its vital support of science education and the public understanding of science.

I want to make clear that CTW has had a direct interest in these appropriations. The National Science Foundation was part of a consortium that invested in the first season of 3-2-1 CONTACT, an educational television series that aims to make science more understandable and appealing to millions of America's 8-12 year old children.

The NSF has also provided $3 million toward a second season of 3-2-1 CONTACT. The Department of Education has provided $2 million for a season II, with an additional $1 million to come from fiscal '83 funds; and the Corporation for Public Broadcasting has earmarked $800,000. We plan to begin this summer to produce a 40 program series with the funding mentioned above, but we continue to seek corporate funding, and will do more programs if the funds can be found from corporate sources.

America's industrial leadership rests on science and technology. But the hard fact is that these fields are not very appealing to America's young people. These negative attitudes translate into pools of professional talent inadequate to a technological age, and no less important, a general population which is scientifically illiterate even though it will be called upon to make critical choices about the uses of science and technology — from nuclear power to genetic engineering.

In some areas we have lost our edge in science and technology. Japan, for example, now has 400 engineers and scientists for every 10,000 citizens. We have only 70. Japan, with half of our population is surpassing us in the total number of degrees in engineering. And in terms of productivity, Japan's is rising while ours is falling. I cite these developments to highlight the magnitude of the challenge we can expect to face for the rest of this century.

Adding to this bleak picture is the plight of our schools. Faced with tighter and tighter budgets, they are compelled to cut their education programs, and give an even lower priority to science — because it is not considered an educational "basic". Well, science is basic to our lives — and getting more so every day.

To maintain its technological leadership, America must attract more citizens to science and technology. However, scientists and engineers are not turned out overnight. They must be attracted to those fields at an early age.

As an NSF study points out, "students who take no more mathematics and science after their tenth year in school have effectively eliminated by the age of 16 the possibility of science or engineering as a career."

This is precisely why CTW's advisors for 3-2-1 CONTACT stressed the crucial importance of the elementary school years in attracting more persons to science and technology. By high school, it often is already too late.

More basic — and alarming — are children's attitudes toward science in their elementary school years.

The National Assessment of Educational Programs reports that only six percent of 9-year-olds listed science as their favorite subject in school. And 27 percent had already decided that a career in science would be too much work and not very satisfying. These are attitudes of children who, for the most part, have yet to experience their first full-time science teacher. It is hardly surprising that the National Assessment finds science knowledge amoung young people in this country in a long term decline.

To reverse these disturbing trends, it is imperative that the Federal government, along with America's institutions and communications media, undertake a major and sustained effort to rekindle an interest in science and science education.

Television in particular — a pervasive and powerful educational medium — can play an important role. It reaches audiences of millions at home. And educational television is widely used in schools as well. For example, 3-2-1 CONTACT has proven extremely popular with in-school audiences.

More then 300,000 elementary teachers asked for our Teacher's Guide for the 13-week series and surveys indicate the show's classroom effectiveness.

In addition, we extended the impact of 3-2-1 CONTACT beyond the home and classroom. Using the series as the focal point, many museums and science centers mounted special educational programs to supplement the content of the programs. The series even inspired new Girl Scout merit badges in science.

In these days of harsh budget stringencies, it is important to note that quality educational television can be a very effective means of reaching large national audiences at relatively low cost.

It is sometimes hard to grasp the enormous reach which broadcast television makes possible. For example, in its four broadcast runs 3-2-1 CONTACT programs have received more than 450 million individual viewings. That translates to a cost per program viewed of less than 2¢.

For programs like SESAME STREET, for which funding permits new production year after year, the impact is staggering. Each week more than 10 million different households in this country view an average of two programs. Each year, assuming conseratively that only one person per household watches the show, SESAME STREET receives more than one billion viewings in this country — at a cost of less than one penny per viewing — and beginning next season none of those pennies will come directly from federal appropriations.

Let me add a word here about the emerging role of the new technologies such as computers and video discs. These hold promise of adding powerful new means of providing education — which CTW and other organizations are actively exploring. However, the excitment of new technologies should not obscure the fact that it will be a considerable time before access will be available to large numbers of children, especially including disadvantaged.

At least through the 80's television broadcast will remain the technology which can deliver quality education to mass audiences on a cost-effective basis. It works, it is widely available and it is what most children will use to educate themselves. It would be ironic indeed if the promise of the long term future should rob our current generation of children the educational programming they need to learn.

Mr. Chairman, America's industrial leadership clearly rests on its science and technology. Developments on the international front suggest the scope and intensity of the challenge this nation will face from high technology countries for many years to come. The NSF stands as the only funding source related directly to science, and our own experience is that without a central source with a specific and dedicated interest, it is difficult to get focused momentum going in any area. Without such a source, I believe that nothing significant is going to happen in this critically important field.

The NSF's science education programs merit and need your continued support.

STATEMENT OF BRUCE CHRISTENSEN, PRESIDENT, NATIONAL ASSOCIATION OF PUBLIC TELEVISION STATIONS

ACCOMPANIED BY COLIN MOOR, COORDINATING PRODUCER, NOVA

Senator GARN. Next I would like to call to the witness table, Mr. Bruce Christensen, president of the National Association of Public Television Stations.

Mr. CHRISTENSEN. Senator Garn, my name is Bruce Christensen, I am president of the National Association of Public Television Stations. With me is Colin Moor who is coordinating producer for the series NOVA. He works with the television State VSH in Boston.

I have a statement for the record and a few brief introductory remarks, and then I would like to have Mr. Moor speak about NOVA and that particular program.

Senator GARN. Your full statement will be placed in the record.

Mr. CHRISTENSEN. Over 100 million viewees each week benefit from the science programs that are broadcast on public television. The program that has been developed by the NSF, its education program, was critical in developing the series NOVA and 3-2-1 Contact. From a high of $3.3 million in 1977, public understanding of science program funds for public broadcasting are now down to $1 million for fiscal year 1982.

No funding has been provided in the administration's 1983 budget request which eliminated funding for every NSF science education program except for graduate fellowships. At a time when America's productivity is failing to keep pace with our foreign industrial competitors and at a time when the intellect and judgment of all of our citizens are being tested in our society, commonsense requires that science education should be enhanced at every education level rather than eliminated at any level.

We strongly believe that a national program like public understanding of science and the public television programs that it has supported have a proven track record and they can help make the difference in making our society better able to deal with technological changes in understanding the science complexities that we all face.

In Utah, for example, money from the NSF public understanding of science program was used to benefit the audiences throughout the State through QUD broadcasts of NOVA and 3-2-1 Contact. The board of education promoted science programs throughout the outlying school districts.

[The statement follows:]

STATEMENT OF BRUCE CHRISTENSEN, PRESIDENT, NATIONAL ASSOCIATION OF PUBLIC TELEVISION STATIONS

Mr. Chairman, I am pleased to have this opportunity to testify before you and your Subcommittee in support of a continued federal commitment to the Public Understanding of Science Program (PUOS) of the National Science Foundation (NSF).

Over 100 million weekly viewers of public television have benefitted immensely from this program. It was and is critical to the development of some of our most important programs, such as NOVA and 3-2-1 Contact. From a high of $3.3 million in FY1979, PUOS funds for public broadcasting are now down to $1 million for FY1982.

As the Subcommittee is well aware, no funding has been provided in the Administration's FY1983 budget request, which eliminated funding for every NSF science education program except for graduate fellowships. This causes us in public television great concern. At a time when America's productivity is failing to keep pace with our foreign industrial competitors at a time when the intellect and judgment of all of our citizens are being tested in our democratic society, common sense requires that science education should be enhanced at every educational level rather than eliminated at any level. We strongly believe that a national program like Public Understanding of Science, with a proven track record, can help.

Otherwise, America's serious shortage today of scientific and engineering manpower will be catastrophic tomorrow; and, a valuable contribution to help make better all-around citizens will be lost.

The problem begins when our children are very young and becomes progressively worse as they grow older. Only 6% of our nine-year-olds list science as their favorite subject. At that age over one-quarter have already decided that a scientific career involves too much work with too little satisfaction, according to the National Assessment of Educational Programs.

By the time our children reach secondary school, less than 50% are required to take any science course after the tenth grade and only one-third of them are required to take more than one year of science or math.

Quality television programming for children reaches to the roots of this problem by revealing science's natural appeal and thus, through exposure, eliminating its power to intimidate.

The Children's Television Workshop (CTW) spent over two years--working with academic experts and consulting over 8,000 children--to develop 3-2-1 Contact, which is the only science series for children on television today. The experts recommended that the program focus on 8 to 12-year-olds, a critical period in the development of children's attitudes toward science--when they begin to think systematically and become interested in cause-and-effect relationships. The children told the CTW researchers what would be exciting and entertaining--a format stressing human involvement, showing strong and competent role models and emphasizing the kids' interest in animals, the human body and the human implications of science and technology.

During its first year on public service television, over 23 million youngsters watched 3-2-1 Contact at home and additional millions viewed it in school--at a cost of a few cents per program per pupil. Over 250,000 elementary school teachers requested the companion teacher guide. Science museums and schools established weekend activities to support and extend the enthusiasm created by the program.

But the favorable attitude toward science created by this programming may be short-lived. The National Science Foundation made a critical financial contribution to the creation of 3-2-1 Contact, which will enter its fourth year of repeated showings on public television next year. One additional season of the program has been funded finally--again with essential support from the National Science Foundation. But to have a positive and lasting impact on the attitudes of children and young adults toward science, merely two series of one program are insufficient. In fact, a whole selection of science series--for home and in-school viewing and for a variety of age groups as well--should be available.

Unfortunately, without funds from the National Science Foundation, the science programs we need are not likely to be produced. Except for the first year of the series, corporate underwriting has not been available for 3-2-1 Contact. Public television stations are committed to this programming, but station funds from the Corporation for Public Broadcasting have already been reduced by 25% and another 25% cut has been requested, and local private giving nationwide is not making up these tremendous losses.

Moreover, the importance of quality science programming is not limited to our future scientists and engineers alone. For increasingly, most careers will require an understanding of science, mathematics and technology. Those untrained in these disciplines in their early years are often intimidated by the apparent complexity of these subjects in their later years--to the detriment of their own careers in particular and this nation's prosperity, productivity and freedom in general. Here again, public service television programming can help solve the problem.

For example, SYNTHESIS, a KPBS, San Diego program in its third year of production, was created with the assistance of NSF funding from FY1976 through FY1980. It explores the critical interaction between the scientist and the policy makers with programs ranging from the story of Mt. St. Helens to the controversy of evolution vs. creationism. Originally designed for a regional audience, the programs have repeatedly aired in prime time throughout the country. They have been used in over one hundred meetings of the national scientific honor society (Sigma Psi), made available to undersities and, because of the NSF imprimateur, received matching funds more than twice as large as the original NSF grants.

Science Focus South, produced by the Southern Educational Communications Association (SECA), is a four-program series outlining energy use options for the southeastern states modeled on the success of SYNTHESIS. As many as two million persons viewed this series on television alone. The 75 public television stations who aired the programs were encouraged to make them freely available for viewing in local high schools and universities. And when this award-winning series was presented to the American Association of Engineering Societies, the Association recommended its distribution to their private sector employers. Like SYNTHESIS, the series was designed to be the first of a number of regionally-oriented science policy programs, but SECA is pessimistic about the program's future because NSF funding is not expected to be available again.

A forthcoming series of eight one-hour television programs about the human brain is being produced by WNET, New York with NSF funding. This overview of current worldwide research will review the structure and functions of the brain as well as mental illness, neurological disease and drug effects.

The NSF funding in FY1980 and FY1981 provided the seed money to secure additional financial support from French and Japanese educational television. The NSF commitment also fostered contributions by other federal agencies, such as the National Institutes of Health and the National Institute of Mental Health, who support projects of this nature but have no administrative mechanism to review and approve grants for television programming. NSF backing will be critical to WNET's ability to secure corporate and public underwriters who seek the reassurance of NSF's scientific and media expertise for professional guidance on funding commitments. Just as importantly, the NSF endorsement helped shape the program itself. NSF is the primary scientific and media clearing house in the U.S. and thus provided critical insights to the WNET staff on effective scientific programming.

The beneficiaries of this program will not be limited to home viewers here and abroad. It will be made available to over 500 U.S. colleges and universities who now participate in the PBS Adult Learning Service and thus used as course credit material.

One of public television's most popular programs is NOVA--seen by as many as 20 million persons per broadcast. In 1972, the National Science Foundation provided funds for establishing the program; NSF granted additional support until recently. NOVA is attributed with fostering an energetic increase in the number of popular science publications and ancillary programs.

Exxon has provided over 30,000 teacher guides to facilitate in-school use of NOVA. But school use cannot match educational interest in the program because, unlike most public television programs, it is not available to elementary and secondary schools free of charge. Thus, as its potential contribution to the classroom rises, its actual use may decline in response to slashed educational budgets.

Even home viewing of this program may be threatened by reduced federal funding. The National Science Foundation no longer contributes to the financing for NOVA. Less than one-fifth of the cost of the program is financed by underwriters; thus over four-fifths of the $5 million program must be financed by local stations. Faced with a reduction in funds from the Corporation for Public Broadcasting, as well as the National Science Foundation, the Department of Education, the Endowments for the Arts and Humanities and the Commerce Department construction and equipment program, public television stations will have no choice but to reduce broadcast hours and quality programs because comparable sources and amounts of funding are not to be found.

At stake is not only our quality science programming but the value of public service television itself--the only American institution which guarantees an equal opportunity for enlightenment to all Americans. Our audiences of over 100 million each week mirror our society as a whole--in employment choices, educational levels, income and racial balance. Thus public television reaches more Americans, more frequently, and more intensely than other public trust institutions because it is broadcast over the airwaves, entering the viewer's home free of charge, rather than being confined to a fixed geographical location, whose value can only be appreciated through travel.

When the National Science Foundation was established in 1950, it was charged with "initiating and supplementing...science education at all levels." The importance of that commitment has not diminished; on the contrary, it is needed more than ever before--to initiate our younger and older Americans alike into an increasingly scientifically oriented world. Public television would like to contribute to the solution by providing more quality science programming; but we are afraid that we may, instead, become part of the problem--by doing less because we have less. Thus we urge your continuing commitment to the National Science Foundation's Public Understanding of Science Program and other important education programs--ideally at the $30 million level recently approved by the House Science and Technology Committee--in order that together we can provide all Americans with the appreciation and understanding of science so necessary to the nation's collective progress.

INTRODUCTION OF COLIN MOOR

Mr. CHRISTENSEN. To speak directly to the points about NOVA and its value, I would like to have Mr. Moor give his statement to the record.

Mr. MOOR. Mr. Chairman, first of all I am honored and pleased to have the opportunity to come before your committee and speak about NOVA. In the few minutes that I have been here at the hearing we have certainly heard a lot of depressing statistics and dire forecasts.

For a moment, I would like to address one of the success stories of the National Science Foundation. NOVA itself, in essence, was founded by the NSF 10 years ago to get started. And the role of the National Science Foundation is and has been vital to science programing that entire period of time. The role of the Foundation grants in the support of science in television is necessary because of the difficulties which science television faces in the corporate underwriting world.

Stated bluntly, rigorous documentary journalism investigating certain areas of the 20th century life style may offend sensitive corporate entities and, therefore, limited much-needed production moneys.

The very existence of NOVA is the result of a small grant made in 1972 to fund the trip of one man to study the ways science was presented on television in other countries. From that $50,000 investment grew the proposal for the first NOVA series. The grant of $250,000 in 1973 for the production of the first NOVA programs was the seed for the germination of the most successful science program on television today.

Simply stated, without the past support of the public, understanding of science program of the National Science Foundation, there would probably be no NOVA today.

Without the endorsement that the National Science Foundation offered, the job of securing additional moneys that started up the NOVA series would have been almost impossible to obtain.

It was at the time a daring and risky idea—a series of hour-long documentaries each dealing with a single topic of science, technology, medicine, or natural history—documentaries that can cost as much as $250,000 per film. No such series had ever been seen on American television. Yet today, NOVA remains one of the most popular and most watched series on public television. Our ratings, on occasion such as our program on the scientists who studied the eruptions of Mount St. Helens, even touch those lofty heights that compare with the ratings.

NOVA started in 1973 with the help and support of the National Science Foundation. Their initial quarter of a million grant represented 20 percent of the first year's budget for NOVA. In that same year the balance of the funding came from grants from Carnegie Corp., the Polaroid Corp., and the Corporation for Public Broadcasting.

For the next 8 years, the National Science Foundation was able to continue their support of NOVA in the form of continung annual grants of $200,000. During that time, however, inflation has taken its toll. While their first grant represented 20 percent of the total NOVA production budget, the last National Science Foundation grant in 1981 represented only 5 percent of our total operating budget.

And in 1982, due to an overall tightening fiscal situation and the budget cuts at the National Science Foundation, NSF was unable to offer any continuing support for NOVA. This year, for the first time since the debut of NOVA nearly 10 years ago, America's premier science series will air without the support or the underwriting credit of the National Science Foundation.

The loss of NSF support in this last year is particularly poignant, for during the run of NOVA's last season we received a National Emmy, television's highest award, for our show titled, "Why America Burns." In addition, the series as a whole was awarded the respected Ohio State Award. The award citation reads and I quote:

> Simply stated, NOVA is the premier science series on American television. Each program combines strikingly beautiful visuals, careful cinematography, and exciting cinematic editing. Research and scholarship are brought to the uniformly high production values, and each week viewers are given enlightening experiences. The series tackles important subjects and handles them with taste and style. If each home in America were only allowed 2 hours of television per week, NOVA would certainly merit being one of those hours watched.

If NOVA continues to receive funding, it will soon begin producing programs for the year 1984, a year filled with brooding Orwellian overtones. Yet we find ourselves, as individuals and as a nation, dependent on science as never before. We are in an era of accelerating scientific change and exploding technology.

In presenting programs about science, technology, and medicine, it has been NOVA's goal to help the general public understand their world, to enable them to be better prepared to live in it, and to encourage them to make sound judgments for themselves about the issues that will affect the progress of science and technology.

To see the continued production of science programing threatened by decreased NSF funding is jeopardizing the very level of science education for millions of Americans. Fourteen million students in kindergarten through 12th grade watch some PBS programing. NOVA is rated as one of the most popular PBS shows among teenagers. Twelve percent of NOVA's total audience is 17 or under in age. To diminish essential NSF funding at this time in our Nation's educational history is undercutting a Federal investment that spans more than two decades. I ask you to continue the Federal funding of the National Science Foundation media support program and thus contribute to the strength of the scientific future of America as a whole.

Senator GARN. Thank you very much.

Bruce, what role do the governments in Western European countries play in supporting their public television?

Mr. CHRISTENSEN. Most of the funding for what we know as public television programs come specifically from government to those agencies that develop and produce the programs. In Britain they have a use tax; if you own a television set you pay a tax. That money then goes into a large fund which funds the kinds of programing that would be comparable to the support of things that we do on NOVA.

Japan has a similar kind of tax on their sets and that is where the money for that comes from, and they are spending sometimes as much as 10 times the amount of money we are putting into the public broadcasting activity.

Senator GARN. Thank you very much. We appreciate both of you being here to testify today.

STATEMENT OF T. BYRON COLLINS, S.J., GEORGETOWN UNIVERSITY

Senator GARN. Next I would like to call to the witness table T. Byron Collins, Georgetown University.

Dr. Collins, we are happy to have you with us today.

Father COLLINS. Thank you, Senator.

We are here to support the request of the National Science Foundation to the committee, thank the committee for its constant support of this. In the varieties of the budget process of the Office of Budget and Management and the Congress and the White House, the National Science Foundation has, by its own right, stayed with some increase, which is unusual.

The thing I would like to point out is the multiplier effect that the National Science Foundation grants have in higher education. In this instance we have a few at Georgetown shown in our testimony. They pick out areas that are in need for higher education and also necessarily for the feeders of higher education, the grammar schools and the high schools. They give you a small grant—in Georgetown in the late 1960's, we got a grant for $50,000 for 3 years to start a computer program. Of course, the relatively small private schools were not in. That started us. Our present programs for computer at Georgetown, together with many other private colleges and universities, is about $3 million a year. That is the kind of thing they started.

They start with you. If it is worthwhile, you carry it forward.

We strongly support the request of the President and some additions, if possible, to the NSF.

Senator GARN. Thank you very much. We appreciate your statement and support of the NSF budget. Is there anything else you would like to add?

Father COLLINS. No, Senator, other than we do thank the committee. It is because of the membership of the committee that the NSF has been successful.

Senator GARN. Father, you would never make it as a politician, you are too direct and to the point and brief to be successful in politics. Thank you.

[The statement follows:]

STATEMENT OF REV. T. BYRON COLLINS, GEORGETOWN UNIVERSITY

Mr. Chairman and members of the committee, I am Rev. T. Byron Collins, S.J., special assistant to the president of Georgetown University.

The Nation's institutions of higher education possess valuable human talent, education, training, and physical resources for the promotion of scientific progress. To carry out this important and expensive work they must rely, in part, on the financial resources provided by the National Science Foundation through its system of sponsored research grants and fellowships.

Presently, the National Science Foundation provides $2,190,000 in support of some 30 scientific research projects at Georgetown University's graduate and medical schools. The NSF grants are a critical component in the university's overall research effort because they help attract an almost equal amount of non-Federal support for research in the areas of mathematical, physical, and biological sciences. A decrease in this support would unquestionably result in the curtailment of many worthwhile projects.

In addition, each year several outstanding Georgetown University graduate students depend on the National Science Foundation fellowships. Though these fellowships are not large, averaging between $6,500 and $15,000 per annum, they contribute significantly to the support the university can make available to graduate students in the sciences and frequently determine whether or not a student can continue his or her scientific studies.

We, therefore, encourage the Congress to support the President's budgetary recommendations for the National Science Foundation in the amount of $1,055,568,000 for fiscal year 1983.

STATEMENT OF ROBERTA MILLER, DIRECTOR OF CONSUMPTION OF THE SOCIAL SCIENCES, ON BEHALF OF THE INSTITUTE FOR SOCIAL RESEARCH

Senator GARN. Next, I would like to call Roberta Miller on behalf of the Institute for Social Research.

Ms. MILLER. Thank you very much.

I am the director of consumption of the social sciences. I am here testifying on behalf of Thomas Juster, the director of the Institute for Social Research. He was not able to be here in Washington.

Dr. Juster prepared a lengthy piece of testimony which he has asked be inserted in the record.

What I would like to do here is to summarize it.

His testimony contains four principal points.

STATEMENT SUMMARIZED

First, the budget recommendation for the social and behavioral science programs at the National Science Foundation represents a severe misallocation of scientific resources. It provides just about half the amount of resources, in real terms, as were allocated in 1980, and is the direct result of the disproportionate cuts first proposed by the administration over a year ago, cuts which are now widely acknowledged as representing poor judgment.

Second, action by the Congress to restore funding to the social and behavioral sciences does not represent the substitution of a political judgment for a scientific judgment. Rather, it can be seen as an action to restore scientific criteria and priorities to the NSF research program and to recognize the importance of the social and behavioral research programs to the attainment of our common national goals.

Third, at the recommended funding levels, an important set of programs in the area of data development, theory and methodology, and new conceptual and empirical initiatives cannot be undertaken. Many of these are programs that have already been extensively reviewed and approved for funding but which cannot be supported at the recommended budget levels.

Fourth, perhaps of even greater programmatic importance, the recommended budget level contains no room for expansion of the social and behavioral program toward research on a set of problems that are significant not only for their scientific importance but for their application to policy relevant issues.

Dr. Juster's formal statement contains a detailed description of the programs that have been approved but cannot be funded and new programs needed and contemplated here.

I would like to urge that the NSF program on social and behavioral sciences be restored by this committee to the fiscal 1980 levels.

I would like to provide the committee with an overall perspective of some resources within the NSF.

As you know, most basic research activities are undertaken at the Nation's colleges and universities or in laboratories that are often attached to those institutions. Thus, scientific resources should be allocated partly in accordance with the pool of scientific personnel available to carry out basic research. In 1980, the total pool of scientific and engineering personnel at colleges and universities totaled a little over 300,000 people, of which roughly half were doctoral-level scientists and engineers.

Of this total pool of potential applicants and recipients of support from the NSF, something like a quarter of the total and about a third of the doctoral-level personnel were social and behavioral scientists. But of the total resources allocated by the NSF, only about 5 percent was provided for the social and behavioral sciences in 1980 and the budget recommendation for fiscal year 1983 calls for a sharp decline—to 3 percent of total resources.

To make these broad comparisons more graphic, NSF resources available to the social and behavioral sciences in 1980 would have enabled a little more than 1 out of every 100 doctoral social scientists to find support at the NSF—approximately 700 grants were awarded in 1980, and the total pool of doctoral-level social scientists at academic institutions was slightly over 50,000. I do not have similar data for the other scientific areas, but the proportion of scientists awarded grants in other disciplines must have been several times larger than in the social and behavioral sciences. And these figures apply to 1980, when social scientists received about 5 percent of the total NSF budget: The presumption is that the total number of social scientists who could be supported from the fiscal year 1983 budget recommendation will be fewer than 1 in 100.

One might argue that this resource allocation decision could be justified if the quality of research in the social sciences was perceptively below that of other disciplines. But the only evidence that we have on that point suggests, if anything, the opposite conclusion—a committee chaired by Nobel Laureate Herbert Simon in the middle 1970's concluded that the quality of research in the social science programs at the NSF was certainly equal to, and possibly better than, the quality of other NSF programs. And the Director of the NSF, Dr. John Slaughter, has testified this year that the quality of NSF social science research is fully equal to the quality of its natural science programs.

While it is difficult to judge the optimum level of support for any given scientific program at the NSF, the evidence seems to me overwhelming that the budget level recommended for the social and behavioral sciences is substantially lower than scientific criteria and potential payoff would justify. I would argue that our ability to make sensible decisions in regard to the society and economy requires a substantial expansion of the knowledge base relating to social and economic phenomena, and that we would benefit greatly from putting significantly larger resources into basic scientific programs in these areas.

I realize that the Congress is faced with severe budget constraints, and that even the most persuasive case is likely to present troublesome issues of priorities. But I suggest that restoration of the social and behavioral science programs to their fiscal year 1980 level is a reasonable compromise between what ought to be done and the budget recommendation.

Let me comment briefly on whether restoration of fiscal year 1980 support levels for the social and behavioral sciences constitutes political intrusion into a scientific process of resource allocation. As a generalization, it seems clearly preferable to have political decisions determine the total amount of resources made available to scientific inquiry, with the scientific community then deciding how those resources are best allocated.

In the present case, the recommendation for the social and behavioral science programs is clearly a consequence of a political rather than a scientific judgment. In last year's budget, the administration recommended drastic cuts amounting to virtual elimination of these programs. With strong support from the Congress, the NSF restored some $11 million to the funding levels originally recommended in the fiscal year 1982 budget.

The present budget recommendations simply reflect radical effect from last year's political discussions about these programs. A vigorous statement by the Congress about the importance of the social and behavioral science programs will be needed before these programs can be restored. It is too much to expect such a statement from the administration to the National Science Foundation given current political realities.

Over the next decade or so, our society can achieve major strides in understanding economic and social processes if we are willing to make the right kinds of investments for a long enough period of time to produce tested and cumulative knowledge about human behavior. The programmatic areas that I have described are all characterized by the need to pay attention both to the development of theory and method as well as the development of appropriate data bases.

And all of these programs require resources that are large relative to the current levels of funding for social science research within the NSF; they also require stability and continuity of support. If I am right that the research programs such as the one described above represent areas in which substantial progress can be made and that a large flow of societal benefits will result, the implication is that future levels of support for the social science research programs within the NSF will have to be substantially larger than they have been during past years.

At present, the United States is at the cutting edge of research in the social sciences, largely because we have invested substantially more than other countries in the past. But as we know from familiar experience in other areas, that advantage can erode quickly. To prevent that error, I urge this committee to recommend an appropriation for the NSF that restores the social and behavioral science programs to their fiscal year 1980 funding level.

I wish to thank the committee for inviting me to testify on this important issue.

Senator GARN. Let me ask the same question I asked of a previous witness. If we do have to fix the budget at $1.072 billion and make some priority choices, where do you recommend we get the additional funds for social and behavioral sciences?

Ms. MILLER. That is a very difficult question, as you know.

Senator GARN. I also said this morning that this is what we will have to do. We are seeking advice.

Ms. MILLER. As you may know, the House of Representatives did add roughly $18 million to the social and behavioral science program at the Foundation this year; the authorization was passed last Wednesday. In order to do that, we reallocated within the research and related directorate of the Foundation, taking small amounts of the money from some of the other research directorates.

The money was taken simply from the increase in the research directorates. Social and behavioral science programs received an increase this year of roughly 1 percent. So there was very little increase compared to the other directorates.

The Senate authorization committee added $5 million to the total NSF budget and earmarked for the social and behavioral science budgets this year. This has been reported out of the Hatch Committee on Labor and Human Resources, and similar authorization has been allocated from Senator Schmitt's subcommittee. Last year this committee combined both the add-on and reallocation in order to put additional funds in the social and behavioral sciences and possibly something like that.

Senator GARN. Thank you very much. We appreciate it.

[The statement follows:]

STATEMENT OF DR. F. THOMAS JUSTER, DIRECTOR, INSTITUTE FOR SOCIAL RESEARCH

Introduction

Mr. Chairman and Members of the Committee: My name is F. Thomas Juster and I am Director of the Institute for Social Research and Professor of Economics at The University of Michigan. By way of general background, I am an economist with an interest in the behavior of households and the measurement of well-being, and a Fellow of the American Statistical Association. At present I am a member of the Advisory Committee to the Congressional Budget Office, of the Consumer Advisory Council to the Federal Reserve Board, of the American Statistical Association's Advisory Committee to the Department of Energy, and Chairman of the Executive Committee for the Conference on Research in Income and Wealth.

My statement relates to the research program of the National Science Foundation, and in particular, to the Social and Behavioral Science programs.

Summary

The statement contains four principal points:

* The budget recommendation for the social and behavioral science programs at the NSF represents a severe misallocation of scientific resources. It provides just about half the amount of resources, in real terms, as were allocated in 1980, and is the direct result of the disproportionate cuts first proposed by the Administration over a year ago--cuts which are now widely acknowledged as representing poor judgment.

* Action by the Congress to restore funding to the social and behavioral sciences does not represent the substitution of a political judgment for a scientific judgment. Rather, it can be seen as an action to restore scientific criteria and priorities to the NSF research program, and to recognize the import-

ance of the Social and Behavioral research programs to the attainment of our common national goals.

* At the recommended funding levels, an important set of programs in the areas of data development, theory and methodology, and new conceptual and empirical initiatives cannot be undertaken. Many of these are programs that have already been extensively reviewed and approved for funding, but which cannot be supported at the recommended budget levels.

* Perhaps of even greater programmatic importance, the recommended budget level contains no room for expansion of the social and behavioral program toward research on a set of problems that are significant not only for their scientific importance but for their application to policy relevant issues.

NSF Support for the Social Sciences

By way of general background, it may be helpful to the Committee if I detail some of the relevant facts about the social and behavioral science programs at the NSF. First, the NSF is the single most important source of support for basic research in virtually all scientific disciplines. The share of resources going to the various scientific fields depends partly on the state of scientific knowledge, partly on the characteristics of research methodology, and partly on historical support levels.

Most basic research activities are undertaken at the nation's colleges and universities, or in laboratories that are often attached to those institutions. Thus scientific resources should be allocated partly in accordance with the pool of scientific personnel available to carry out basic research. In 1980, the total pool of scientific and engineering personnel at colleges and universities totaled a little over 300,000 people, of which roughly half were doctoral-level scientists and engineers. Of this total pool of potential applicants and recipients of support from the NSF, something like a quarter of the total, and about a third of the doctoral-level personnel, were social and behavioral scientists. But of the total resources allocated by the NSF, only about five percent was provided for the social and behavioral sciences in 1980, and the budget recommendation for FY 1983 calls for a sharp decline--to three percent of total resources.

To make these broad comparisons more graphic, NSF resources available to the social and behavioral sciences in 1980 would have enabled a little more than one out of every hundred doctoral social scientists to find support at the NSF--approximately 700 grants were awarded in 1980, and the total pool of doctoral-level social scientists at academic institutions was slightly over 50,000. I do not have similar data for the other scientific areas, but the proportion of scientists awarded grants in other disciplines must have been several times larger than in the social and behavioral sciences. And these figures apply to 1980, when social scientists received about five percent of the total NSF budget: the presumption is that the total number of social scientists who could be supported from the FY 1983 budget recommendation will be fewer than one in a hundred.

One might argue that this resource allocation decision could be justified if the quality of research in the social sciences was perceptively below that of other disciplines. But the only evidence that we have on that point suggests, if anything, the opposite conclusion--a committee chaired by Nobel Laureate Herbert Simon in the middle 1970s concluded that the quality of research in the social science programs at the NSF was certainly equal to and possibly better than the quality of other NSF programs. And the Director of the NSF, Dr. John Slaughter, has testified this year that the quality of NSF social science research is fully equal to the quality of its natural science programs.

While it is difficult to judge the optimum level of support for any given scientific program at the NSF, the evidence seems to me overwhelming that the budget level recommended for the social and behavioral sciences is substantially lower than scientific criteria and potential payoff would justify. I would argue that our ability to make sensible decisions in regard to the society and economy requires a substantial expansion of the knowledge base relating to social and economic phenomena, and that we would benefit greatly from putting significantly larger resources into basic scientific programs in these areas. I realize that the Congress is faced with severe budget constraints, and that even the most persuasive case is likely to present troublesome issues of priorities. But I suggest that restoration of the social and behavioral science programs to their FY 1980 level is a reasonable compromise between what ought to be done and the budget recommendation.

Let me comment briefly on whether restoration of FY 1980 support levels for the social and behavioral sciences constitutes political intrusion into a scientific process of resource allocation. As a generalization, it seems clearly preferable to have political decisions determine the total amount of resources made available to scientific inquiry, with the scientific community then deciding how those resources are best allocated.

In the present case, the recommendation for the social and behavioral science programs is clearly a consequence of a political rather than a scientific judgment. In last year's budget, the Administration recommended drastic cuts amounting to virtual elimination of these programs. With strong support from the Congress, the NSF restored some $11 million to the funding levels originally recommended in the FY 1982 budget. Moreover, Administration spokesmen have been frank to recognize that the original recommendation was, to quote the President's Science Advisor Mr. Keyworth, "poor judgment." And other Administration spokesmen have indicated that their present concerns are with the NSF budget totals, not with how those totals are allocated.

Still, there must be considerable sensitivity on the part of the NSF to recommending what would amount to a considerable expansion of the present levels of support for a set of programs that were viewed with considerable disfavor a year ago. Thus I would argue that a recommendation by this Committee to restore the social and behavioral science programs to their FY 1980 level does not so much involve making a political judgment on how scientific resources are to be allocated, but rectifying a political judgment made last year and now widely perceived to have been a mistake.

Program Impacts

The budget recommendation will not provide sufficient resources to fund a substantial number of high priority projects that have already been reviewed and approved by the NSF. As illustrations:

* Funding would not be available for measurement-oriented projects like the study of time use (which would contribute significantly to our understanding of productivity, volunteer activity and the underground economy); for development of the environmental data base; for the collection of new data on the quality of American life; and creation of public use data files from governmental archives, as well as the development of computing software for providing widespread access to existing data for both academic and public policy users, would be severely restricted.
* The recommended program would require severe cuts in major ongoing programs in statistical methods and theory, and would severely limit an important new program designed to assess the quality and validity of survey measures--a methodological program that could increase the efficiency of the billions of dollars spent on data collection activities in both the public and private sectors.
* The recommended program severely inhibits projects of a "risk capital" nature: peer review panels are reluctant to fund potentially important but risky ideas in a resource-constrained environment. Thus the development of new lines of inquiry would be severely hampered, with a major impact on future scientific progress.

I would like to elaborate a bit on the importance of one important set of programs that could not be sustained. In recent years, the NSF has devoted considerable attention to the development of longitudinal data bases in a number of areas. These large measurement-oriented programs are very expensive to maintain, and they require commitments over long periods of time. But they are capable of dealing with some of the most important questions that the social sciences can answer--what are the processes by which individual and aggregate behaviors change, and what is the nature of the basic theoretical structure that seems most consistent with these fundamentally dynamic observations of behavior?

One way to gauge the importance of continuing these types of programs is to ask what we have learned in the past from similar studies. Let me provide three illustrations of insights that have been obtained from longitudinal studies that could not have been obtained from conventional studies where behavior is measured at a single point in time.

Dependency and poverty. In a typical recent year, something like eight percent of U.S. households receive some form of welfare payment (defined as AFDC, food stamps, general welfare, or supplemental security income), while about ten percent are classified as below the poverty line. Since these proportions tended to be about the same each year during the last half of the 1970s and the first few years of this decade, most people interpret these results as suggesting the existence of a poor and dependent underclass amounting to something like ten percent of the population.

But longitudinal studies of income change involving the same families and individuals suggest a strikingly different conclusion. During the decade of the 1970s, these studies show that while about eight percent of U.S. households received welfare during a typical year, about twenty-five percent received welfare during at least one year of the decade, and only about 0.7 percent were dependent on welfare all the time.

Moreover, a popular conception is that welfare dependency is passed on from one generation to the next, based largely on the casual observation that some welfare parents seem to produce welfare children. But the longitudinal panel data suggest that, while the children of parents who are poor have a significantly higher probability of being poor themselves, children of parents who are dependent on welfare are not significantly more likely to be dependent on welfare themselves, standardizing for the likelihood of poverty dependency. That finding would be more robust (or possibly negated) if we had more years of experience relating to welfare dependency across generations.

Finally, many people view welfare dependency as a condition where people receive welfare and typically do not work. The londitudinal panel data suggest that most people who receive welfare also work, and that most welfare recipients get more than half their income from work rather than from welfare.

Voting behavior. Political scientists have traditionally worked with models of voting behavior that view voters as similar to consumers testing various products on the market, then making up their minds about which products (candidates) to select on the basis of product (candidate) attributes and policies.

Longitudinal data on voting preferences and behavior indicate that this is not an accurate characterization for the majority of people. Most voters have their minds made up even before candidates have been selected, and most people appear to have strong and continuing identifications with political parties and with the ideologies associated with those parties. These enduring loyalties appear to be the dominant force in voting behavior.

Moreover, these data show that the people most likely to seek information and to be better informed about issues are not "independent" voters with weak party attachments, but voters with strong party attachment: most voters appear to use information as a means of buttressing views that they have long held.

Juvenile delinquency and high school dropouts. There is a well-documented association between juvenile delinquency/crime and high school attendance: high school dropouts have much higher delinquency rates than others. That finding led to a major effort during the 1960s to retain potential dropouts in the school system, on the grounds that an effective retention program would save billions in lower delinquency and crime rates.

Longitudinal data suggest a different perspective. These data show that high school dropout rates are well-predicted by earlier experiences in school, and that the incidence of delinquency is also related to these earlier school experiences. Thus the data provide no support for the proposition that increasing school retention rates would have an impact on delinquency behavior, since both are the result of (unfavorable) prior school experiences.

Scientific and Policy Agenda Items

I noted above several of the program areas in which the recommended budget would not permit research activities to be undertaken. Here, I discuss a number of new research initiatives with the potential for yielding important scientific advances and for providing a better informed perspective on important issues of national policy. Two of them are areas where I am virtually certain that scientific results with a high degree of policy relevance will be forthcoming, since we understand the problem and lack only the resources to attack it. The others are areas where the problems are visible and very real, but where the outcomes seem to me substantially less certain.

Areas where research has a high probability of advancing scientific knowledge and providing useful policy guidance are:

Saving behavior. It is recognized that an increase in the rate of capital formation is essential to the improvement of productivity performance, and that the required capital formation depends on an adequate flow of private saving. But we have little tested or reliable knowledge about what determines private saving behavior, how saving might change in response to various tax or other stimulii, what will happen to saving as the population ages and as private pension coverage increases, etc.

One important reason for our uncertain knowledge about private saving behavior is the virtual total absence of an accurate set of data that measures personal saving, and its change over time, at the level of the individual household. The best such data were obtained almost two decades ago, while the most recent data (of dubious reliability) were obtained in the early 1970s. Unless that gap in knowledge is filled, we will not know much more after the next decade than we know now, and the same unanswered questions will exist.

Health and human behavior. Health care currently consumes about 10 percent of our national product, and that figure has been rising rapidly. It is coming to be recognized that a major cause of adverse health outcomes is not the failure of medical technology but the perverseness of human behavior. Thus the next frontier in health research (and especially in medical care cost containment) is likely to lie in research that makes possible an understanding of the behavioral causes of many of our major trauma and serious illnesses: smoking, alcoholism, drug abuse, lack of exercise, poor diet, bad sleeping habits, and failure to use seat belts.

The other three areas are ones where I believe that substantial progress is likely, but where both scientific results and policy-relevant insights are somewhat less certain. These areas are:

Productivity of the firm. Despite all the attention paid to the recent decline in national productivity, our ability to understand productivity change at the level of individual firms is severely hampered by the information base. It is not that we lack data on firms that relate to productivity; but we do not have longitudinal data at the right level of aggregation (the individual firm, where investment decisions are actually made), and the available data are not well-suited for productivity analysis since they were not originally designed for that purpose.

Technology and organizational structure. A great deal of production-oriented behavior takes place in group settings. The nature of much of this group-oriented interaction is likely to be substantially changed in the near future by the addition of a new interaction element: computers and robots, intellectual and mechanical resources never before under the direct control of work groups. We need a major program designed to find out how technological change can be managed and organized so as to gain maximum productivity benefits while maintaining and promoting worker well-being and minimizing the social and economic dislocations often associated with new technology.

Given our failure to apply what past generations of social scientists have learned about group functioning and work behavior (relative to the applications of the Japanese) we probably require a major effort focused both on generating and applying the next round of relevant knowledge. And it would be a great advantage to program this activity so that it creates ready links between basic studies of group processes and applied studies of group behavior in relevant settings.

The influence of uncertainty on behavior. In the more tranquil economic and social world of the 1950s and 1960s, it may have been possible to model behavioral responses effectively without worrying too much about the way in which uncertainty about the future influenced behavior: the assumption that the future is continuous with the past, while never entirely satisfactory as a basis for modeling behavior, can reasonably be judged to have been more satisfactory then than it is now.

In particular, we need to understand how people form judgments about the future—what information they use, what weights they give to various types of information, etc.; we need to understand how people cope with uncertainty, which can be defined operationally as a distribution of possible outcomes with a great deal of dispersion; and we need to understand the way in which decision outcomes, and possibly decision processes as well, are modified by the existence of a less stable economic and social environment.

Concluding Comments

I would like to conclude this statement by commenting on two other issues that are often raised in conjunction with social science research. First, it is often thought that public support for basic social science research is not really essential to its continuation, since there are private sector firms and private foundations willing and able to pick up those research programs which are deemed to have merit. Second, people often ask: what have we ever learned from investing in social science knowledge, and isn't most of what we know pretty much common sense?

Private Sector and Foundation Support

It is certainly true that applied social science research is heavily utilized in the private sector, and that private foundations have in the past and still are a significant source of support for basic and applied social science research. But profit-making firms cannot justify (to their stockholders) investments in basic knowledge which cannot be viewed as proprietary. Social science research itself provides the answer to why private sector firms will not invest significantly in basic research of a nonproprietary sort: since all of their competitors will eventually gain access to the nonproprietary knowledge that one firm supports, the total return cannot be captured by the investing firm, but will be distributed among the investing firm and its competitors. Therefore the society will underinvest in basic research if it leaves that activity entirely to the functioning of the free private market.

So far as foundations are concerned, they seem to see their role as much more one of providing a modest amount of seed money for an interesting new enterprise than of continuing the large investments required to accumulate knowledge. Basic research does not consist solely of generating new ideas, although those are obviously indispensable to scientific progress. Rather, it consists of a sustained effort to extract all of the implications from an exciting idea, a process that requires attention to measuring behavioral phenomena, to refining the theory as a consequence of inconsistency with observed behavior, and so on. The process is slow but cumulative, and most private foundations do not see that kind of activity as their appropriate domain.

In addition, most private foundations seem to have a strong preference for using their resources to change the world rather than to study it: they prefer to mount experimental or operating programs designed to improve the conditions of groups or communities that happen to be their special interest. For one reason or another, devoting resources to trying to understand the society rather than to try and improve societal conditions is not seen as a very exciting activity. I would be more than pleased if that were not true, but a great many conversations with foundation people lead me to the conclusion that the preference for exploring change rather than studying behavior is a very real one.

None of this suggests that cooperative programs involving the public sector and either the private sector or the foundation sector are impossible or unfeasible. In fact, such efforts have been successfully mounted. But it is simply unrealistic to expect that the needed basic research in the social and behavioral sciences can be supported largely out of either the private business sector or the private foundation sector.

Social Science Knowledge

The Committee should understand that the accumulation of social science knowledge is typically an incremental affair in which a large number of small steps eventually leads to a totally different perspective--a major gain in knowledge. But there seems not to be the "breakthrough" characteristics of scientific progress that are sometimes found in the natural sciences.

Thus to see what has been learned from past investments in social science research programs, it is helpful to look at differences in our understanding of the economy and society over long spans of time. For example, we could compare our present knowledge with what was widely believed around the turn of century, in a number of areas. As illustrations:

> Aging. It used to be thought that people lost intellectual and physical capacity as they grew older. But we now know that a good part of the loss of intellectual capacity is simply atrophy--diminution results not from incapacity but from lack of stimulation, and does not appear where adequate stimulation is present.
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> Health. Our perceptions of how to achieve good health efficiently have changed dramatically over the decades. In relatively poor societies, public health measures like innoculation have made an enormous difference in life expectancy by virtue of the elimination of certain causes of illness or death. In more recent decades, we have made dramatic progress in the treatment of certain types of pathologies as a result of improvements in medical technology. But one of the most important insights we have now is that perverse behavioral phenomena (diet, smoking and drinking habits, seat-belt usage, reactions to stress, etc.) are one of the most important causes of morbidity and mortality. The solution to improving health status in a country like the U.S. thus depends importantly on understanding these perverse behavioral phenomena.

Productivity and organizational structure. At one time people thought that differences in productivity could be largely explained by differences in the amounts of capital available per worker. We now understand that differences in organizational structure and norms play an important role in explaining productivity differentials and productivity growth.

Race and sex characteristics. Income differences between blacks and whites in the U.S. are now explained by differences in the quantity and quality of schooling, in the characteristics of the families and communities in which people are raised, and by differences in aspirations and opportunities; differences between males and females are now explained by differences in labor force experience, career aspiration, and marital attachment. In both cases, there are residual differences which are quite likely attributable to discrimination, either past or present. Within race or sex classes, differences in genetic endowment are recognized as important. But people used to think in terms of genetic factors as explaining differences between blacks and whites or males and females.

Educational achievement. It is now widely recognized that differences among young people in family and community backgrounds have a substantial impact on educational achievement. Thus while the quantity and quality of formal schooling is still thought to be important, people no longer think that what happens in school dominates educational achievement.

Living environment for older people. At one time we thought that older people were clearly better off in family environments; then it began to be perceived that communities where older people could spend more time with peers had advantages; now we think that a combination of independence, easy access to family and friends, and the opportunity to interact with either peers or others leads to systematically better outcomes.

Well-being. In earlier and simpler times, changes in well-being were typically thought about as having largely economic and material roots. We have now begun to understand the importance of the environment, of nonmarket productive activity that takes place within households, and of the crucial role of family and community structure in people's well-being.

Business planning. Over the past several decades, the combination of operations research and linear programming has revolutionized the practices of many large corporations, especially as regards the management of material flows. The same knowledge has had a major impact on certain aspects of military strategy.

Prediction of major social and economic phenomena. Despite appropriate cautions about the failures of social science research in prediction, it is still true that we are vastly better able to understand and predict the path of business activity, of variations over time in birthrates, the outcome of an election, etc., than was the case earlier in the century. The visible shortcomings of social science predictions should be assessed against the standard that we have come to expect a great deal, and often fall short of that expectation.

Crime. To note one area in which we seem to have accumulated largely negative knowledge, we seem to be at the point in analysis of criminal activity where we have discredited a lot of theories but have not been able either to understand the roots of crime or to devise strategies for reducing it.

Conclusions and Recommendations

The principal thrust of this statement is that, over the next decade or so, our society can achieve major strides in understanding economic and social processes if we are willing to make the right kinds of investments for a long enough period of time to produce tested and cumulative knowledge about human behavior. The programmatic areas that I have described are all characterized by the need to pay attention both to the development of theory and method as well as the development of appropriate data bases. And all of these programs require resources that are large relative to the current levels of funding for social science research within the NSF; they also require stability and continuity of support. If I am right that the research programs such as the one described above represent areas in which substantial progress can be made, and that a large flow of societal benefits will result, the implication is that future levels of support for the social science research programs within the NSF will have to be substantially larger than they have been during past years.

At present the U.S. is at the cutting edge of research in the social sciences, largely because we have invested substantially more than other countries in the past. But as we know from familiar experience in other areas, that advantage can erode quickly. To prevent that error, I urge this committee to recommend an appropriation for the NSF that restores the social and behavioral science programs to their FY 1980 funding level.

I wish to thank the Committee for inviting me to testify on this important issue.

STATEMENT OF DR. BERNARD SAGIK, VICE PRESIDENT OF ACADEMIC AFFAIRS, DREXEL UNIVERSITY

Senator GARN. Next I would like to call Dr. Bernard Sagik.

Mr. SAGIK. Thank you very much. I admit I will not be as brief as Father Collins, but I would like to second his comments.

Senator GARN. If we get too far ahead, the witnesses won't be here. We will let you use a little bit of his time.

Mr. SAGIK. I will take the occasion to introduce J. K. Lee Smith who is here with me. He is vice president of governmental relations at Drexel. Both of us are here representing Drexel University which, as you have heard before, is a privately technologically oriented institution which has been a pioneer in cooperative education over half a century. In all disciplines, whether technical or in the humanities, our 7,000 day undergraduates spend three to seven quarters on rotation working away from campus after their freshman year.

As a result, our undergraduates earn more than $22 million annually toward the cost of their own education. This supplements the university-administered aid program of $16 million. Thus, they are earning more, in fact, than is given through various loans and grants as financial aid in their first year and a half. Drexel students become major financial contributors to the educational process thereafter.

The cooperative education requirement in science and engineering and other curricula at Drexel is attractive financially in an inflation-ridden economy. It is even more so as student financial aid packages are becoming increasingly costly as a result of changing budgetary philosophies.

As a result, undergraduate engineering enrollments at Drexel are greater than at any other private institution in Pennsylvania and represents close to 13 percent of all undergraduate engineering enrollments, private and public, in Pennsylvania.

The Drexel applications of the 1982 freshmen, almost three-quarters are from Philadelphia, its approximate four counties, New Jersey and Delaware. In large measure this high concentration of regional and local students reflects the impact of cooperative education and its traditional dependence on the whole Delaware industrial complex for job placement during cooperative rotation. This mutually beneficial association is now threatened by growing industrial plant obsolescence which reduces area industry's ability to compete profitably and to support programs.

At the graduate level, our applicant pool of engineering and science broadens geographically. Only 40 percent are from Pennsylvania. About 22 percent are foreign nationals. Again, the number of graduate applicants is up markedly at this time in electrical and computer engineering, mechanical engineering, chemical engineering, materials engineering, and physics. We are hampered in our ability to accept many fine applicants both by the numbers of assistantships we can provide and by the limits of space and equipment.

During the past 3 fiscal years, Drexel's engineering faculty has been awarded about $6.9 million in Federal grants and contracts and $1.4 million in industrial research support. The science faculty in this same period has garnered $5.3 million in Federal and $.4 million in industrial support. Quite bluntly, we are uncertain that our faculty, despite increased research productivity and despite added recruitment, will be as successful in gaining as much support this fiscal year. As has been noted by others, less than 15 percent of current Federal research and development funds is in support of basic scientific and engineering research. Our own experience confirm the major role of the Federal Government in supporting this type of research.

In the proposed modified fiscal year 1982 budget, only DOD's budget was increased. For basic research, the proposed reduction in constant 1980 dollars is about 11 percent. At Drexel, this growing emphasis on applied defense research is shown by the fact that in the first 3 months of the university's current fiscal year, applied research has been funded by DOD-related agencies at a rate nearly 50 percent greater than in our last fiscal year, while nondefense, basic research funding is off, as is support for education in science and engineering.

Thus, this latter decline will ultimately affect the ability to support defense-related and other applied research and development projects.

Last year, Drexel University itself, of its own funds, spent nearly $600,000 to provide interactive computational capability for its freshmen. We have exceeded that expenditure this year in support of enhanced computer capability, but we find we need to spend at least as much to upgrade laboratory and computational facilities each year for the foreseeable future in computer-aided manufacture, robotics, computer graphics, systems design, and control processes.

We are now offering direct university research support via faculty leaves, released time, faculty research awards, minigrants to new faculty, graduate assistantships, and faculty equipment grants.

We have increased library support for periodicals and monographs 15 percent in each of the last 3 budget years, but inflation in this area has been 17 percent, forcing us to cancel some periodicals. Tuition revenue alone cannot provide for this upgrading indefinitely.

We are concerned at Drexel, as are other engineering schools, that in a time of ever more limited Federal support the view will prevail that what moneys there are go to a few largely graduate or professional schools as programs such as ISAD, REAP, exhaust, or cut or drop. Thus, the important role played in the past by a university such as Drexel in preparing students for continued studies at the major graduate and professional research centers will be ignored.

If in the decade to come our teaching laboratories have antequated and obsolete equipment and our faculties are not encouraged to compete with basic research funds, then the great research universities will suffer too. It is to NSF to whom we have turned in the past. The graduate centers of the United States presently are utilizing the research potential developed in their students by universities such as Drexel.

This human capital is not being replenished. Drexel research in materials engineering developed a splendid source of faculty in powder metallurgy at universities and of engineers in industries throughout the United States. Without such research and the support necessary to sustain it, from freshman through Ph. D., this Nation cannot hope to reindustrialize and must yield technological leadership to others in an ever-increasing number of fields.

Thank you for the privilege of addressing you.

Senator GARN. Doctor, are there any specific disciplines that have a greater need than others to upgrade their instructional equipment?

Mr. SAGIK. I think, almost without exception, there is not an institution that is truly at the cutting edge in computers. Time and again universities in order to upgrade are forced to call on some industrial engineer to come in and assist them. We simply do not have the resources, whether we are talking engineering or basic computer science or the use of computers in processed control.

Senator GARN. Thank you very much.

[The statement follows:]

STATEMENT OF BERNARD PHILLIP SAGIK, VICE PRESIDENT FOR ACADEMIC AFFAIRS, DREXEL UNIVERSITY

We at Drexel University are honored and grateful at being asked to present testimony on the possible effects of the proposed Federal budget on institutions of higher education, and more particularly, on Drexel University.

Drexel University is a private, non-sectarian, co-educational technologically-oriented institution which since its founding in 1891, has stressed "sound training in practical fields" ... seeking to ... "open the way to happiness through usefulness ... ". As a means of achieving these goals, Drexel has pioneered in cooperative education for over 60 years. In all disciplines, our 7,000 day undergraduates spend from three to seven quarters working away from campus after their freshman year. Over 1400 employing companies and agencies are involved in this effort. (It was a Drexel co-op student who was at JPL when Voyager I transmitted pictures of the newly discovered 13th and 14th moons of Saturn.) Ninety-five percent of Drexel's undergraduates, after the freshman year, earn more than $22,000,000 annually towards their own cost of education. This supplements the University-administered $16,000,000. Thus, given some financial aid in their first year-and-a-half, Drexel's students become major financial contributors to the educational process thereafter. The importance of this fact is underlined by a family income analysis showing about 75% of our students to come from families whose annual income is less than $24,000 and 90% from families with less than $30,000 annual income (see Table following).

FAMILY INCOME	# OF STUDENT APPLICANTS
0 - 2,999	406
3,000 - 5,999	259
6,000 - 8,999	254
9,000 - 11,999	326
12,000 - 14,999	314
15,000 - 17,999	334
18,000 - 20,999	406
21,000 - 23,999	404
24,000 - 26,999	329
27,000 - 29,999	215
30,000 and above	348
	3595

The cooperative education requirement in science, in engineering and other curricula at Drexel obviously is attractive financially in an inflation-ridden economy. It is even more so as student financial aid packages become uncertain or more costly as a result of changing budgetary philosophies. This is reflected in a steady flow of applications to Drexel even as demographic projections suggest that college enrollments in our geographical area ought to have peaked. Indeed, undergraduate engineering enrollments at Drexel are greater than at any other private institution in Pennsylvania, representing close to 13% of all undergraduate engineering enrollments -- private and public -- in Pennsylvania.

Of applications for the Fall 1982 freshman class, 25% of the University's total are in the two curricula leading to the B.S. in Electrical and Computer Engineering and the B.S. in Mathematics and Computer Science. These applicants are predominantly from SE Pennsylvania (72% from Philadelphia County and the four proximate counties), New Jersey and Delaware. About 2.0% of our science and engineering undergraduates are foreign nationals. In large measure, this unusually high concentration of regional and local students reflects the impact of cooperative education and its traditional dependence on the Delaware Valley industrial complex for job placement during cooperative rotations. This mutually beneficial association is threatened during recessionary periods and by any growing industrial plant obsolescence which reduces area industry's ability to compete profitably and to support programs of cooperative education.

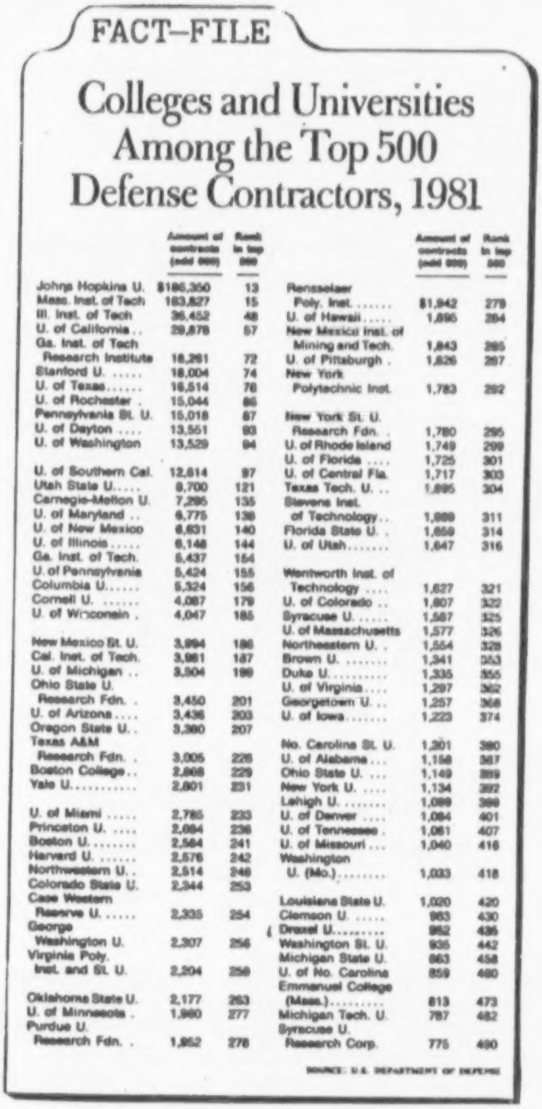
I wish to address, too, in this context of industrial cooperation, the growing need for programs of faculty renewal and retraining. This is becoming an increasing area of concern as, nationally, the number of US graduate student applications in science and engineering peaks and the faculty, no longer increasing in number, ages along with the rest of the population. While it is difficult to measure effectiveness precisely, our own experience with industrial leaves suggests that this device can be one means of benefitting university faculties in areas as divergent as accounting and engineering. Concomitantly, the experience is beneficial to the host corporation which also may be facing personnel freezes. We already utilize as adjuncts many persons employed professionally outside the University. (Parenthetically, I note that Drexel has the only accredited degree program in Architecture in the US staffed wholly by adjuncts.) Inducements to facilitate increased exchanges with industry could include (1) Federal support of regional registries of industrial and university personnel in the program, and (2) contributions to continuing faculty benefits (a direct cost to the universities, which at Drexel equals about 20% of salary).

At the graduate level, our applicant pool of engineering and science broadens geographically. Only 40% are from Pennsylvania. About 22% are foreign nationals. Again, the number of graduate applicants is up markedly at this time in Electrical and Computer Engineering, Mechanical Engineering, Chemical Engineering, Materials Engineering, and Physics. We are hampered in our ability to accept many fine applicants both by the numbers of assistantships we can provide and by the limits of space and equipment.

During the past three fiscal years, Drexel's engineering faculty has been awarded about $6.9 million dollars in federal grants and contracts and $1.4 million dollars in industrial research support. The science faculty in this same period has garnered $5.3 million dollars in federal and $.4 million dollars in industrial support. Quite bluntly, we are uncertain that our faculty, despite increased research productivity and despite added recruitment, will be as successful in gaining as much support this fiscal year. As has been noted by others, less than 15% of current federal research and development funds is in support of basic scientific and engineering research. Our own records, noted above, confirm the major role of the federal government in supporting such research (contrast the ratios of federal to industrial dollars).

In the proposed modified FY 1982 budget, only DOD's budget was increased. For basic research, the proposed reduction in constant 1980 dollars is about 11%. At Drexel, this growing emphasis on applied defense research is shown by the fact that in the first three months of the University's current fiscal year, applied research has been funded by DOD-related agencies at a rate nearly 50% greater than in our last fiscal year, while non-defense, basic research funding is off, as is support for education in science and engineering (see Table on DOD-supported research, below).

We find ourselves grateful for the initiative of Dr. Slaughter, NSF's Director, in seeking cooperation between his agency and private foundations. If science-engineering education is not to be left with obsolecent equipment to use in preparing the next generation of engineers and scientists, the success of such efforts as Dr. Slaughter's is imperative. Last year, Drexel University spent nearly $600,000 to provide interactive computational capabilities for its freshmen. We have exceeded that this year. We need to spend at least as much to upgrade laboratory and computational facilities each year for the foreseeable future in computer-aided design, computer-aided manufacture, robotics, computer graphics, systems design, and control processes. We now offer direct University research



FACT–FILE

Colleges and Universities Among the Top 500 Defense Contractors, 1981

	Amount of contracts (add 000)	Rank in top 500
Johns Hopkins U.	$186,350	13
Mass. Inst. of Tech	183,827	15
Ill. Inst. of Tech	36,452	48
U. of California	29,878	57
Ga. Inst. of Tech Research Institute	18,261	72
Stanford U.	18,004	74
U. of Texas	16,514	78
U. of Rochester	15,044	86
Pennsylvania St. U.	15,018	87
U. of Dayton	13,551	93
U. of Washington	13,529	94
U. of Southern Cal.	12,614	97
Utah State U.	8,700	121
Carnegie-Mellon U.	7,295	135
U. of Maryland	6,775	139
U. of New Mexico	6,631	140
U. of Illinois	6,148	144
Ga. Inst. of Tech.	5,437	154
U. of Pennsylvania	5,424	155
Columbia U.	5,324	156
Cornell U.	4,087	179
U. of Wisconsin	4,047	185
New Mexico St. U.	3,994	186
Cal. Inst. of Tech.	3,961	187
U. of Michigan	3,504	199
Ohio State U. Research Fdn.	3,450	201
U. of Arizona	3,436	203
Oregon State U.	3,380	207
Texas A&M Research Fdn.	3,005	226
Boston College	2,868	229
Yale U.	2,801	231
U. of Miami	2,785	233
Princeton U.	2,684	236
Boston U.	2,584	241
Harvard U.	2,576	242
Northwestern U.	2,514	248
Colorado State U.	2,344	253
Case Western Reserve U.	2,335	254
George Washington U.	2,307	256
Virginia Poly. Inst. and St. U.	2,204	259
Oklahoma State U.	2,177	263
U. of Minnesota	1,980	277
Purdue U. Research Fdn.	1,952	278
Rensselaer Poly. Inst.	$1,942	279
U. of Hawaii	1,895	284
New Mexico Inst. of Mining and Tech.	1,843	285
U. of Pittsburgh	1,826	287
New York Polytechnic Inst.	1,783	292
New York St. U. Research Fdn.	1,780	295
U. of Rhode Island	1,749	299
U. of Florida	1,725	301
U. of Central Fla.	1,717	303
Texas Tech. U.	1,695	304
Stevens Inst. of Technology	1,669	311
Florida State U.	1,659	314
U. of Utah	1,647	316
Wentworth Inst. of Technology	1,627	321
U. of Colorado	1,607	322
Syracuse U.	1,587	325
U. of Massachusetts	1,577	326
Northeastern U.	1,554	328
Brown U.	1,341	353
Duke U.	1,335	355
U. of Virginia	1,297	362
Georgetown U.	1,257	368
U. of Iowa	1,223	374
No. Carolina St. U.	1,201	380
U. of Alabama	1,158	387
Ohio State U.	1,149	389
New York U.	1,134	392
Lehigh U.	1,089	399
U. of Denver	1,084	401
U. of Tennessee	1,061	407
U. of Missouri	1,040	416
Washington U. (Mo.)	1,033	418
Louisiana State U.	1,020	420
Clemson U.	983	430
Drexel U.	952	436
Washington St. U.	935	442
Michigan State U.	863	458
U. of No. Carolina	859	460
Emmanuel College (Mass.)	813	473
Michigan Tech. U.	787	482
Syracuse U. Research Corp.	775	490

SOURCE: U.S. DEPARTMENT OF DEFENSE

support via faculty leaves, released time, faculty research awards, mini-grants to new faculty, graduate assistantships, and faculty equipment grants. We have increased library support for periodicals and monographs 15% in each of the last three budget years (but inflation in this area has been 17%, forcing us to cancel some periodicals). Tuition revenue alone cannot provide for this.

As a private institution dedicated to cooperative education and with a tradition of self-help to maintain, we confess that the effects of inflation and reduced support for basic engineering and science research and education are providing a veritable test of our ingenuity and creativity in utilizing space, equipment, and money. We are happy to keep on with that self-set task, but are concerned that in a time of ever more limited federal support, what monies there are will go to a few largely graduate or professional schools. Thus the important role played by universities such as Drexel in preparing students for continued study at the major graduate and professional research centers will be ignored (see Attachment on NSF Fellowships). In the decade to come, if our teaching laboratories have antiquated and obsolete equipment, if our faculty are not encouraged to compete for basic research funds, then the great research universities will suffer, too. The graduate centers of the US are utilizing the research potential developed in students by universities such as Drexel. This human capital is not being replenished.

Drexel research in materials engineering developed a splendid source of faculty in powder metallurgy at universities and of engineers in industries throughout the US. Without such research and the support necessary to sustain it (from freshman year to the Ph.D.), this Nation cannot hope to reindustrialize and must yield technological leadership to others in an ever-increasing number of fields.

Thank you for the privilege of addressing you.

[Attachment]

SWARTHMORE STUDENTS GET 11 SCIENCE GRANTS

(By Dick Pothier, Inquirer staff writer)

Swarthmore College students have received 11 prestigious National Science Foundation (NSF) fellowships, the largest number of grants for any college in the nation, the NSF said yesterday. The only schools to receive more of the NSF grants, which provide a graduate-study stipend of $6,900 a year for 3 years, were several large research universities, such as Princeton.

The NSF awarded 500 of the grants across the country for graduate study in natural and social science, mathematics and engineering. Among other area institutions, Drexel University students received four NSF grants; the University of Pennsylvania, two; and students at the following colleges, one: Beaver College, Bryn Mawr College and Haverford College. Pennsylvania State University students received two NSF grants.

Students at Princeton University received 28 NSF grants. Harvard University received 27 grants; Cornell University, 16; Yale University, 15; Massachusetts Institute of Technology, 14; and the University of California at Berkeley, 13. The only other college to receive five or more NSF grants was Dartmouth College, which received six.

VETERANS ADMINISTRATION

STATEMENT OF DONALD H. SCHWAB, DIRECTOR, NATIONAL LEGISLATIVE SERVICE, VETERANS OF FOREIGN WARS

Senator GARN. Next I would like to call Donald H. Schwab, director, National Legislative Service, Veterans of Foreign Wars.

Mr. SCHWAB. Thank you, Mr. Chairman.

Events have overtaken the testimony I prepared and sent to the committee a week ago. We are, of course, delighted that the Senate voted an increase of $500 million in outlays in the Veterans Administration Medical Career and the Research Act and general operating expenses. Two of the shortages that have existed and still exist are specific funding for the nursing scholarship program authorized by Public Law 96–330. You will recall that program was funded in the amount of $4 million for the fiscal year 1982, but no money is specifically identified for that purpose in the 1983 budget.

In addition, another provision of Public Law 96–330 authorized expansion of the Veterans Administration geriatric research and care program from 8 to 15 centers. That program by Public Law 96–330 was to have been funded in the amount of $10 million in 1981 and $25 million in the 3 succeeding fiscal years. No money has been funded for expansion of that geriatric program which is so very badly needed.

These are the existing shortcomings, as I see them, in the proposed fiscal year budget for the VA for 1983.

We are somewhat disappointed, Mr. Chairman, in the way the Senate has handled the cost-of-living increase problem.

In talking with the Budget Committee people earlier this year, a total freeze on COLA's for 1983 would have saved $20 billion. In the ensuing 3 years as a result of the 1-year freeze, a savings would have been about $80 billion. And out of the $20 billion that would be saved in 1983, $17 billion of that would come out of the social security program. So that what we have left with this selective freeze on cost-of-living increases is really more window dressing than anything else and our commander-in-chief wrote to every Member of the Senate objecting to this selected cost-of-living increase.

As the budget, Senate Concurrent Resolution 92, as amended in the Senate the other evening, provision is made for a 7.4-percent increase in pension payable by the Veterans Administration to veterans with non-service connected disabilities and their survivors.

This is necessary if social security is to be increased 7.4 percent, because if pension isn't increased a like amount, at the end of the year many people on the pension rolls will lose their pension entirely and most all will suffer a reduction of pension.

One of the provisions of Public Law 95–588 indexed the pension program to the social security increase and the selling point on that to Congress was that pensions would never again be reduced because of increases in social security benefits.

Now, the amendment also provides for a 4-percent cost-of-living increase for veterans rates 70 percent or more disabled and this is going to cause problems. Where you give non-service-connected veterans an increase of 7.4 percent and only veterans rated 70 percent or more a 4-percent increase—and, of course, the compensation program is the very heart and keystone of veterans benefits—in the commander-in-chief's letter to the Members of the Senate it was his opinion that if cost-of-living increases had to be frozen, it should be done equally and evenhandedly across the board to all programs, and not single out specific programs.

That concludes my remarks, Mr. Chairman. Let me say again, I am delighted with the actions that the Senate did take in restoring $500 million in outlays because the VA budget prior to that was just 3 percent of the Federal budget. That is the least it has been in over a decade. In 1976, the VA budget was 5.1 percent of the Federal budget, and we now have 30 million veterans, the most we have had.

I will be happy to respond to any questions you might have.

Senator GARN. I would agree with you that the cost-of-living freeze is a sort of window dressing when we ignore social security. I will not make the speech over again today that I have been making many places over the last several weeks, but the budget crisis simply cannot be solved as long as we ignore the problem of social security—that goes beyond the issue of the total budget and the deficits to the solvency of the social security system.

As long as many of my colleagues on both sides of the aisles continue to demote the issue and not face up to it, or going in the other direction and frightening people who are on social security for political purposes that their pensions are going to be cut and taken away from them by Ronald Reagan and other bad people, the problem will continue to grow. And so I think we must address the problem of all of the entitlements.

Mr. SCHWAB. I am delighted to hear your analysis of this. You recall the prior administration established a commission to study social security and make a recommendation; they submitted a 413-page report to President Reagan last spring and we have another commission again going over the same ground back at the end of the calendar year.

Senator GARN. We will probably get this information after the elections, you must realize that. We can't utilize current information that we already know and hopefully come up with something new, especially if it takes after November 2 to obtain that information. I was here when we increased taxes sufficiently to solve the solvency problem of social security for the next 75 years—that lasted a little over 4 years and that is even a gross exaggeration. Usually we do better than that; we might have gone 6 or 7 years with our 75-year estimate.

I don't know of any time in my public career where I have been more disappointed in many of my colleagues who will not face up to the problem. I am not advocating anybody's pension be reduced or anybody be removed from the rolls. I am advocating that we have got to face up to the dramatic increases in the program and the solvency issue. The longer we wait, the more difficult it becomes to solve the problem. It just becomes worse and worse. So I thank you very much for your testimony today.

Mr. SCHWAB. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF DONALD H. SCHWAB, DIRECTOR, NATIONAL LEGISLATIVE SERVICE, VETERANS OF FOREIGN WARS

Thank you for the privilege of appearing before this distinguished Subcommittee to present the views of the Veterans of Foreign Wars of the United States.

My name is Donald H. Schwab, and it is my privilege to serve the more than 1.9 million men and women of the Veterans of Foreign Wars as their National Legislative Director.

Mr. Chairman, as is a matter of record, on the fifth of this month the Senate Budget Committee unanimously rejected the President's proposed fiscal year 1983 budget and approved, instead, by a vote of 12 to 8, the Administration's compromise budget, identified as S. Con. Res. 92.

To illustrate the gravity of the situation being faced by our nation's veterans, their dependents and survivors, I believe it is first necessary to recapitulate the President's proposed and now rejected budget as it would have pertained to the Veterans Administration.

The President had proposed a Federal budget of $758 billion in outlays and a VA budget of $24.4 billion, or 3.2 percent of the Federal budget in outlays, the least it would have been for more than a decade. This budget represented an increase of $222 million over that of the fiscal year 1982, but with proposed cost-savings of $328.6 million. The Senate Veterans' Affairs Committee in its report to the Budget Committee, Senate Committee Report No. 12, 97th Congress - Second Session, accepted only $150 million in cost-savings consisting of $70.7 million in specified cost-savings measures and $79.3 million in unspecified savings and/or receipts. The Committee summarily rejected substantial reductions for the dependents of veterans in receipt of compensation for their service-connected disabilities rated at 30 and 40 percent, and the dependents of disabled veterans undergoing vocational rehabilitation. In addition, and as enunciated in part in the cited report, there were a number of programs which were either underfunded or not funded at all. For example:

1. Two of the provisions of Public Law 96-330, the "Veterans Administration Health Care Amendments of 1980," the Veterans Administration Health Professional Scholarship Program and expansion of the Geriatric Research, Education and Clinical Centers were not funded. The Physicians' Scholarship Program has never been funded and only in the fiscal year 1982 was $4 million appropriated for the Nurses' Scholarship Program and no money was included for this vital program in 1983. Expansion of the Geratric Program from 8 to 15 centers was to have been funded in the amount of $10 million for the fiscal year 1981 and $25 million for each of the following three fiscal years. The crucial need for these two programs has been

fully documented in testimony before this and other Committees of both the Senate and House of Representatives and fully realized and supported by Congress. You will recall that on August 22, 1980, former President Carter vetoed the enacting legislation, H.R. 7102, and four days later, the House of Representatives overrode that veto by a roll call vote of 401 to 5 and, within hours, the Senate did likewise by a roll call vote of 85 to 0.

2. Funding for Medical and Prosthetic Research at a proposed $137.6 million was still deficient by approximately $10 million merely to maintain the status quo. This program, which has produced two Nobel Prize winners, has not only attracted highly qualified physicians who might not have otherwise entered the VA system, but has advanced health-care not only for veterans, but for the entire nation.

3. In recent years, funding has not been adequate for cost-of-living increases granted VA employees and, as a result, the VA has had to absorb a portion of the cost thereof by siphoning off money from other activities.

4. The Administration's budget proposed cost-savings of some $17 million in restricting beneficiary travel for veterans in need of care through VA facilities. Not only would this cutback hurt most those who can least afford any unexpected expenditures, but it has been determined by the VA such a reduction is not legally authorized and the medical care account would have to make up for this underfunding.

Mr. Chairman, the President's proposed budget for the VA was one with which we could have lived in good conscience, notwithstanding the cost-savings, provided the deficiencies noted above were rectified or ameliorated. You will recall that more than a quarter of a billion dollars was cut from veterans' benefits and VA programs in the fiscal year 1982 budget.

Given the foregoing, Mr. Chairman, let us now examine the Administration's compromise budget. It calls for a Federal budget of $779.1 billion in outlays and $22.7 billion for the Veterans Administration. This is a reduction for the VA of $1.7 billion from that which the President proposed, $1.1 billion less than the current fiscal year, and a mere 2.9 percent of the Federal budget. A new low in decremental funding. In addition, the reconciliation provision of S. Con. Res. 92 mandates the Veterans' Affairs Committees of both Houses to advance cost-savings legislation in the amount of $188 million.

Mr. Chairman, without question, the proposed reductions in veterans' benefits and services, will be hurtful to not only our wartime disabled veterans, their dependents and survivors, but, also, to critical functions within the Veterans Administration.

For the sake of clarity, Mr. Chairman, permit me to first address the proposed one year freeze on cost-of-living increases for all Federal civilian and military retirees, beneficiaries of entitlement programs including the Veterans Administration compensation, Dependency and Indemnity Compensation and pension programs, but excluding Social Security benefits, to "restrain indexing" of the Food Stamp Program and "revise eligibility" for Supplemental Security Income (SSI).

Mr. Chairman, the Commander-in-Chief of the Veterans of Foreign Wars, Arthur J. Fellwock, has written to every member of the Senate registering our opposition to the proposed selective cost-of-living freeze. Since the Senate Budget Committee believes that the economic and fiscal problems of our nation require this retrenchment, among others, we of the VFW believe it should be imposed even-handedly across-the-board, with no exceptions. Our needy wartime veterans and their destitute widows in receipt of pension payable by the VA are truly needy by virtue of their entitlement as are many others who will suffer by the proposed freeze. Therefore, we oppose the cost-of-living increase freeze in its present form.

In a related matter, our Commander-in-Chief's letter to members of the Senate also opposed decoupling the pension program from its present indexing to increases in Social Security benefits. One of the strongest arguments in favor of Public Law 95-588 was the assurance to all members of Congress that never again would an increase in Social Security benefits cause a disproportionate reduction in pension. Decoupling will, in fact, reduce pension for VA beneficiaries if Social Security remains exempt from the cost-of-living freeze and many will fall through the "safety net."

In Senate Report No. 97-385 the Budget Committee " . . . assumes no cost-of-living increase for the veterans pension and compensation programs on July 1, and October 1, respectively." Elsewhere, under the heading "First Reconciliation," there is a reduction of $188 million due to no pension cost-of-living increase for the fiscal year 1983.

Mr. Chairman, if Social Security beneficiaries receive a cost-of-living increase in June to be reflected in their July checks and those in receipt of VA pension are subjected to the freeze, many in receipt of pension will suffer a complete loss of pension or a reduction in pension at the end of the calendar year. However, decoupling pension from Social Security requires a legislative initiative. Now, if the pension freeze is imposed as of October 1, 1982, as reconciliation would indicate, those in receipt of pension would receive a double shock. First, they would lose the increase in money to which they had become accustomed to July through September and, then, many would suffer the complete loss of pension and most a further reduction in pension. This, since due to the increase in Social Security benefits, but not in pension, their total income would exceed the assured income levels established by Public Law 95-588 as amended. The current assured income under the pension program for a veteran alone is $4,960 per year and for a widow alone, $3,324, in both instances counting all income from all sources including Social Security. The average monthly pension payment presently being made by the VA to veterans is $224.39 and to widows, $110.25.

Mr. Chairman, the proposed VA budget of $22.7 billion in outlays is less than the fiscal year 1981 budget of $22.9 billion and there are still more than 30 million veterans. The proposed reduction of $1.1 billion from the fiscal year 1982 budget will require decisions to be made which will be difficult and regrettable.

It is assumed that $771 million would be realized by denying a cost-of-living increase to our disabled veterans in receipt of compensation for their service-connected disabilities payable by the VA and, also, withholding such an increase from their widows and children in receipt of Dependency and Indemnity Compensation. Mr. Chairman, I believe it has been made abundantly clear that the VFW opposes the selective cost-of-living increase freeze and especially for our disabled veterans and their survivors. How soon some forget the debt owed our veterans who have insured the freedom we now all enjoy.

If the foregoing reduction is made, plus the cost-savings of $150 million already accepted by the Veterans' Affairs Committee, there would still remain $179 million to be carved out of ongoing programs. Frankly, I do not see how this is possible and still maintain the integrity of veterans' benefits and services.

The most devastating cut of all, which would do real violence to the VA hospital and medical care system, is the proposal to freeze at the 1982 levels funding of non-defense discretaionary appropriated programs. The VA accounts which would be affected are the Medical Care account, the Medical and Prosthetic Research account, the Medical Administration and Miscellaneous Operating Expenses account, the Major and Minor Construction accounts, the State Grants accounts and the General Operating Expenses account.

Mr. Chairman, in our view, freezing the discretionary appropriated medical account would require reducing personnel in the Department of Medicine and Surgery by 13,000, relocating thousands of VA patients and employees, and canceling the scheduled activation of 76 newly constructed projects including nursing home care units and replacement hospitals. This proposed freeze, if sustained, could well be the prelude to dismantling the VA hospital and medical care system.

In view of the very serious threat to health-care for our nation's veterans this particular freeze would cause, I now ask this Committee in the name of the Veterans\of Foreign Wars and on behalf of our disabled veterans, to exempt VA Function 700 from the discretionary fund freeze and restore the $530 million in medical care as proposed by President Reagan in his budget.

Mr. Chairman, as we all know, the Veterans Administration budget, contained in the HUD-Independent Agencies Appropriation, is the most important single piece of legislation considered each year insofar as our disabled veterans, their dependents and survivors are concerned. The Veterans Administration simply cannot continue to suffer from repeated decremental budgets and honor the nation's commitment to our veterans who have, indeed, rendered a very special service.

This concludes my testimony, Mr. Chairman, and I will be happy to respond to any questions you may have.

STATEMENT OF RICHARD P. SCHMIDT, M.D., DEAN, UPSTATE MEDICAL CENTER, STATE UNIVERSITY OF NEW YORK

Senator GARN. Next is Mr. Richard Schmidt, dean, Upstate Medical Center, State University of New York.

Doctor, we are happy to have you with us today.

Dr. SCHMIDT. Thank you, Mr. Chairman, I am president of the Upstate Medical Center, the State university. Yesterday we had our graduation. A couple of weeks ago I testified at an oversight hearing in the House and started out with my graduation remarks and I think at that time I was prepared to give the honorable Representatives the M.D. degree. But this morning I did notice I brought the right notes.

I am here in my role as chairman of the Veterans Administration Special Medical Advisory Group which, as you know, has a new relationship to the Congress established in law for an annual report. That report now has been submitted to the Senate and House Committees on Veterans Affairs.

I have submitted a written summary statement and I will not take the time to go through all of this, but I would like to highlight a couple of the points that the preceding gentlemen said some of the things in which I also believe very deeply concerning the Department of Medicine and Surgery of the VA and its needs to maintain viability to care for the veterans.

There is one area which we have requested in the special medical advisory group, a study on eligibility and entitlement to be done.

This has been shared with people in both the Senate and the House as a matter which we feel to be of great importance to the Veterans Administration. Neither the Administrator nor the Chief Medical Director has taken an official position on this, but this is a rather confusing area. The veterans organizations are concerned that which they are entitled to and that which they have in the past should not be reduced or changed.

We in the special medical advisory group in requesting that this study be done, recognize that the laws, regulations, and rules and practices concerning the delivery of medical services through the Veterans Administration to the veteran are very confusing, complex, and it seems that new laws, new regulations establishes new eligibility almost every year without adding the new funds to take care of it. This has a danger of reducing the services now given eligible veterans to divert into a path. One of the most telling of that for the older veteran and before 1919 comes well over half of the males in the United States who are over the age of 65 will be veterans and eligible for care through the VA without a means expressed.

We added the new eligibility or entitlement dealing with real or supposed exposure to agent orange. We would feel in making up the budget that the Congress should look very carefully to staff on reducing the eligibility list so that those who receive care can receive that of the highest type.

I have included that in my report. I can report to you also that I think the Department of Medical Surgery is in good hands, generally well managed, generally giving care which is comparable to that in other hospital systems that we have in this country.

Quite contrary to what we sometimes see in the public press, I have been proud to serve both as a member and now as chairman of the special medical advisory group and I will be pleased to respond to any questions you have, sir.

Senator GARN. Thank you very much, Doctor.

In your statement, you note that the VA health care system cannot be wholly exempt from budget reductions. Do you have any specific recommendations as to where savings could be achieved without degrading health care services?

Dr. SCHMIDT. It is hard to see where it can be without reducing services to someone.

The VA, in my own experience, my own observation is—I am not with the Veterans Administration—it is about as efficient and as low cost as I could imagine it being done? I think the significant reduction in budget would be a significant reduction in services and if that, indeed, is decided.

I might point out, if services are reduced to the veteran, that most of those who receive services are also destitute or poor and would be given services through other means of public support, such as medicaid or even medicare.

Senator GARN. Doctor, thank you very much. We appreciate your willingness to testify today.

Dr. SCHMIDT. It is a great honor to be here today.

[The statement follows:]

STATEMENT OF RICHARD P. SCHMIDT, M.D., PRESIDENT, UPSTATE MEDICAL CENTER, STATE UNIVERSITY OF NEW YORK

I am Dr. Richard P. Schmidt, President of the State University of New York Upstate Medical Center in Syracuse and Chairman of the Veterans Administration Special Medical Advisory Group.

I am pleased to have the opportunity to testify before you in the latter capacity today, at a time when the decisions to be made about the health care system of the Department of Medicine and Surgery carry with them many implications for its future course.

If it were my duty to account for the state of the Department, I could tell you today that I feel that its health care system is basically a sound one, with a record of accomplishment in which all of us might justly take pride. I am, at the same time, apprehensive about maintaining and improving it.

The essential fact about this system is that it can and does deliver medical care of high quality to veteran beneficiaries and does so on a basis that is fully comparable, on a facility-by-facility basis, with similar health care facilities in the private sector, sensational accounts to the contrary in the lay media notwithstanding.

But I think that we have a tendency to forget or overlook the fact that the system we have today is built upon foundations that were laid many decades ago. Excellence in a health care delivery system is an organic growth. It is neither created in a day nor imposed by fiat. Just so, unfortunately, is decline and I fear the long-term consequences of neglecting to acknowledge that fact in today's conditions.

It is well understood that these are times of general budgetary constraint and I do not believe that the VA health care system can be wholly exempt from responding to that fact. I do question, however, whether sufficient attention is paid to fundamental examination of how to protect the system for the long run against unintended long-term untoward side effects of short-term decisions.

I urge that in considering how to meet the current constraints and plan for the future that we should not, for example, cripple either the system of affiliations which has served both the VA and the schools of health professions so well or the program of research, both of which are necessary and important to patient care now and as investments in the future production and quality of health care for veteran patients in the DM&S system. In these matters, it is still important to remember, notwithstanding that we speak of a budget of billions of dollars, that it is possible to be penny wise and pound foolish.

If that is the case, it seems to me that we have an affirmative duty to make suggestions about planning for the future. The Special Medical Advisory Group has taken a first – and I believe important – step in that direction. It is not an easy path to follow and will undoubtedly lead to full public expressions of concern by many within the VA, in the Congress, and on the part of the veterans and the leaders of their national organizations.

The step to which I refer stems from the fact that we have become deeply concerned over the future availability and quality of health and medical care for veterans of our military services. This concern has increased in recent years because of expanded eligibility created by legislation for certain groups of veterans and concomitant restrictions in budget to accomplish new or expanded missions.

The SMAG believes that the determination of eligibility and entitlement as well as definition of the population to be served, are key driving forces in planning for the Department of Medicine and Surgery, its size and its budget. Further, policies and legal restrictions may limit comprehensiveness of care according to the nature and extent of service-connected disability, clinical setting (inpatient or outpatient), age, the type of care needed and many factors which may be subject to misinterpretation on the part of the veteran expecting service. Further, a veteran may be placed in the confusing situation of being rejected for services at one medical center and accepted at another because of varying interpretation of eligibility and other related factors.

Because of these factors, the SMAG requested that a Task Force study completed in 1974 be updated to incorporate subsequent changes in the laws an other significant developments. Accordingly, in August 1980 another DM&S Task Force was formed under the Chairmanship of Mr. Calvin E. Chandler. Dr. Richard M. Ryan, Jr., member of the SMAG, served as a consultant and provided liaison with that group. The Task Force Report was reviewed in detail by the SMAG at its meeting on June 24-25, 1981. In addition to a review by the SMAG, representatives of major veterans organizations were given the opportunity to comment on the written report and in a meeting with the Chief Medical Director, attended by Dr. Ryan and by me. Our views on this matter have also been communicated to the chairmen and ranking minority members of the Veterans' Affairs Committees of both houses of Congress.

It is important to note, for the record here, that although the SMAG document has been shared within the Central Administration and with selected leaders of veterans organizations, it remains a "working paper" of the Special Medical Advisory Group. To my knowledge, the Administrator and the Chief Medical Director have taken no official stand.

The SMAG believes that there is need for a comprehensive review and restatement of the laws governing eligibility and entitlement for health care delivered by the Department of Medicine and Surgery of the Veterans Administration. We believe that this should be undertaken by the appropriate committees of the Congress in order to eliminate existing confusion and further to guide planning for appropriate staffing and budgeting. It is our recommendation that this lead to a determination of the population within our 30,000,000 veterans who are eligible for care and that once that population be defined, that care provided be comprehensive.

It is well-recognized that those who have served our country in war and who have suffered disability as a result of that service must be given the highest priority for care by the Veterans Administration. There are many others, however, who have been given entitlement to comprehensive or limited care based on other factors such as age or financial hardship. We are concerned over the effect of broad interpretation of legislation such as that dealing with worries over real or presumed effects of exposure to toxins in "Agent Orange." Adding new services to large groups of veterans at a time of restricted resources may reduce or eliminate the VA's ability to serve those who have been traditionally served, such as the destitute veteran without a service-connected disability.

I have brought this matter to your attention as something more than an earnest of good faith on the part of our group in coming to grips with difficult and serious issues affecting the future of the VA's health care system.

I urge that in your consideration of the DM&S budget you bear in mind that it is important not to overlook the needs that the current eligibility and entitlement rules impose upon the system and to be mindful that its future should be planned on the basis of a most careful study of the dimensions of future need.

Thank you again for the opportunity to appear before you today. I shall be pleased to attempt to answer any questions you may have.

STATEMENT OF DR. SHERMAN M. MELLINKOFF, M.D., UCLA SCHOOL OF MEDICINE

Senator GARN. Next, Dr. Sherman Mellinkoff, UCLA School of Medicine.

Dr. MELLINKOFF. Thank you very much, Mr. Chairman.

My name, as you have correctly pronounced it, is Sherman Mellinkoff. I presently serve as the dean of the UCLA School of Medicine and also as a professor of medicine at UCLA.

The Association of American Medical Colleges, as an assembly, elected me their chairman in 1974 and concurs entirely in my views and I am pleased to speak in the name of that organization as well as in my own.

Let me express my deep appreciation to this subcommittee and to you, Mr. Chairman, for granting our request to appear before you. It is one of the greatest strengths of our American system that citizens who believe they have contributions to make to the legislative process are given the opportunity to do so.

My interests and those of the association and the Veterans Administration medical care program arise from the highly productive synergistic relationships that have developed between the country's medical schools and the VA hospitals since the end of World War II. Affiliation agreements encompassing medical care, medical education, and research are now established between 102 medical schools and 141 of the existing 182 VA health care facilities. These arrangements attract to the Veterans Administration hospitals first-rate doctors and insure that services for sick or injured veterans is always abreast of scientific progress and are provided by physicians trained in the latest medical advances.

The administration continues to request increases for the VA health care system that will sustain but not enhance that enterprise. The VA health care enterprise serves a dual national purpose: The provision of medical care to our fellow citizens who have served us with distinction in the Armed Forces and the advancement through research of our capability to improve this care. Thus, the Association of American Medical Colleges: One, is the need for broad-based belt tightening but recommends a 9-percent increase over the current level for VA medical care in fiscal year 1983; and two, urges a more complete restoration of funds for the VA biomedical research program.

Providing the veterans with necessary medical care is the decent response of a grateful nation and a noble mission for the Veterans Administration. Significantly, the characteristics, and thus the requirements, of the veteran population vary from those of the general public in that:

The majority are self-referred for hospital care; most in-patients present multiple serious medical problems; and, as Dr. Schmidt referred in his testimony, well over half of the VA's patients are at or below the poverty level, a reality that complicates posthospitalization treatment plans, and to the extent that care is adequate, may drive, in the future, many of our veterans to county hospitals for care when the county hospitals themselves may in many cases be underfunded.

Since 1971, as Dr. Schmidt noted, the number of veterans 65 years of age or older in need of medical services has steadily increased. At the present time, 11 percent of the veteran population is over 65 and by the year 2,000 this percentage will be 32. These statistics, coupled with the steep down trend in mortality rates for all Americans over 80 years of age, suggest the need for care among veterans will not level off in the foreseeable future but rather will continue to rise.

It is essential that the VA health care system continue to meet the challenge presented by its very special patient care population. The association believes the enterprise could benefit from a more substantial infusion of funds. Thus, we recommend a 9-percent increase above current appropriation. Even this, however, is not up to the rate of increase in health care costs in the country as a whole, but will assist the VA to improve further its health care effort.

The 9-percent increase would be about 10 percent less than the increase in the other hospitals throughout the United States.

Concomitantly, the Association of the American Medical Colleges urges the Congress to expedite the VA's current $147 million supplement request for funding. This allocation is needed to offset mandatory pay increases and thus allow the VA to maintain current staffing levels.

Medical care is a personnel-intensive industry. Thus, virtually the only possible response to financial shortfalls is a reduction in the size of health care staff. At present, the staff to patient ratio of the VA is 2.24 per 1,000 patients. This is currently far below that which prevail in the private sector in 1980 which was 3.35 per 1,000 patients. Any further reductions in this area would have a seriously adverse impact upon the ability of the VA to provide quality medical care.

Another potential threat to the VA health care enterprise is embodied in the House Budget Committee's proposal—that is, House Concurrent Resolution 345—to freeze or maintain fiscal year 1983 appropriations at the existing level. Adoption of that proposed funding strategy would devastate the VA medical system, result in the loss of thousands of health care staff, and precipitate closure of many wards, and probably even hospitals. Thus, it is essential that this formulary approach to paring the budget be modified in favor of a plan that does not abandon veterans in dire need of hospital care. The VA strategy of offering selected members of its staff the opportunity to engage in biomedical, behavioral, and rehabilitative research has paid off handsomely for science and for the veterans.

Moreover, it has enabled the VA system to recruit and retain physicians of professional excellence. The VA is engaged in some of the most important biomedical research being undertaken in this country. For example, in the veterans hospitals—three veterans hospitals affiliated with the UCLA School of Medicine—research is finding better ways to prevent and to treat peptic ulcers, some kinds of cancer, many afflictions of the aged, several bad infections including so-called Legionnaire's disease, and life-threatening mood disorders such as severe depression.

The VA research budget sustained a serious setback in fiscal year 1982. This must be subtantially rectified in fiscal year 1983 if the great benefits of sciences are to continue.

Specifically, last year the research account was reduced by more than $11 million from $144 million in fiscal year 1981 to $128 million in fiscal year 1982. This retrenchment, I am told, forced termination of over 200 biomedical research grants, 26 rehabilitative engineering research projects, and 15 health services programs.

Another devastating consequence was the loss of 182 full-time research personnel. Virtually every component of the VA's splendid research effort was adversely affected, including investigator-initiated grants, cooperative studies, and numerous other high-priority programs. The VA was unable to undertake any new programs and was forced to curtain sharply productive research.

The appropriations requested for fiscal year 1982, some $138 million, represent a 7.4-percent increase over the current level. However, this level does not equal the fiscal year 1981 allocation in current, let alone in constant, dollars and would result in the loss of an additional 200 full-time personnel. Thus the VA's research enterprise would have been truncated by nearly 400 people, or some 9 percent, over a brief 2-year span.

Moreover, physicians and scientists who otherwise would be attracted to the VA because of its biomedical research program will be discouraged from undertaking this service.

A cascade of lost quality would be more expensive to repair than to avoid. It would signal the dismantling of a thriving research effort that holds enormous promise for improving health care for our Nation's veterans.

Mr. Chairman, in summary, the VA medical care and biomedical research enterprise is a vitally important national resources, one that has already sustained more than its fair share of retrenchments. Thus the Association of American Medical Colleges urges that the committee approve further increases for medical care and boost the research budget in order to insure that the VA will continue to serve the health needs of our Nation's veterans and retain its capacity to contribute to the revolution in biomedical science that is generating so much hope in our Nation today.

LETTER OF APPRECIATION

Finally, I believe I have attached to the testimony that I submitted a few days ago in which I have just now tried to update, what I found a rather touching letter that happened to come across my desk just as I was preparing this testimony originally after notification by you, Mr. Chairman, that I would be invited to do so. I think you have a copy of it but I will be glad to leave another one. It is from a Phillip Blair who wrote in his own hand what the care at Wadsworth Veterans Hospital, in affiliation with UCLA School of Medicine, has meant to this one elderly man with service-related injuries and illnesses of the most severe kinds.

Senator GARN. We will be happy to include that in the record, Doctor.

Dr. MELLINKOFF. Thank you very much.

Mr. Chairman, I will be happy to answer any questions you might have.

Senator GARN. Dr. Mellinkoff, we appreciate your testimony today. I think you have explained your position very well and I have no questions for you at this time.

Thank you.

[The statement follows:]

STATEMENT OF SHERMAN M. MELLINKOFF, M.D., DEAN, UNIVERSITY OF CALIFORNIA AT LOS ANGELES SCHOOL OF MEDICINE, ON BEHALF OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Mr. Chairman and members of the Subcommittee the interests of the Association of American Medical Colleges in the Veterans Administration's medical care programs arise from the highly productive synergistic relationships that have developed between the country's medical schools and the VA hospitals since the end of World War II. Affiliation agreements encompassing patient care, medical education and research are now established between 102 medical schools and 141 of the existing 182 VA health care facilities. These arrangements attract to the Veterans Administration hospitals first-rate doctors and ensure that services for sick or injured veterans is always abreast of scientific progress and are provided by physicians trained in the latest medical advances.

Overview

The Administration continues to request increases for the VA health care system that will merely sustain rather than enhance that enterprise. The VA health care enterprise serves a dual national purpose: the provision of medical care to our fellow citizens who have served us with distinction in the Armed Forces; and the advancement, through research, of our capability to improve this care. Thus the AAMC:

- acknowledges the need for broadbased belt tightening but recommends a 9% increase over the current level for VA medical care in FY 1983, and
- urges a more complete restoration of funds for the VA's biomedical research program.

Medical Care

Providing the veterans with necessary medical care is the decent response of a grateful nation and a noble mission for the VA. Significantly, the characteristics, and thus the requirements, of the veteran population vary from those of the general public in that:

- the majority are self-referred for hospital care,
- most in-patients present multiple serious medical problems,
- well over half of the VA's patients are at or below the poverty level, a reality that complicates post-hospitalization treatment plans.

In addition, since 1971 the number of veterans 65 years of age or older in need of medical services has steadily increased. Already, 11 percent of the veteran population is over 65 and by the year 2000 this percentage will increase to 32. These statistics, coupled with a steep down trend in mortality rates for all Americans over 70 years of age, suggest that the need for care among veterans will not level off in the foreseeable future but rather will continue to rise.

It is essential that the VA health care system continue to meet the challenges presented by its very special patient population. The Association believes the enterprise could benefit from a more substantial infusion of funds, thus we recommend a 9% increase above current appropriations. Even this, however, is not up to the rate of increase in health care costs in the country as a whole, but will assist the VA to improve further its health care efforts.

Concomitantly, the AAMC urges the Congress to expedite the VA's current $147 million supplement request for funding. This allocation is needed to offset mandatory pay increases and thus allow the VA to maintain current staffing levels. Medical care is a very personnel-intensive activity; thus, virtually the only possible response to financial shortfalls is a reduction in the size of the health care staff. At present, the staff to patient ratio of the VA (2.24 per 1000 patients) is currently far below that which prevailed in the private sector in 1980 (3.35 per 1000 patients); any further reduction in this area would have a seriously adverse impact upon the ability of the VA to provide quality medical care.

Another serious threat to the VA health care enterprise is embodied in the Senate Budget Committee's proposal (Senate Concurrent Resolution 92) to "freeze" or maintain FY 1983 appropriations at the existing level. Adoption of that proposed funding strategy could devastate the VA medical care system, result in the loss of thousands of health care staff and precipitate closure of many wards and probably even hospitals. Thus, it is essential that this formulary approach to paring the budget be modified in favor of a plan that does not abandon veterans in dire need of hospital care.

Biomedical Research and Development

The VA's strategy of offering selected members of its staff the opportunity to engage in biomedical, behavioral and rehabilitative research has paid off handsomely for science and for the veterans. Moreover, it has enabled the VA system to recruit and retain physicians of professional excellence. The VA is engaged in some of the most important biomedical research being undertaken in this country. For example, in the veterans hospitals affiliated with the UCLA School of Medicine, research is finding better ways to prevent and to treat peptic ulcers, some kinds of cancer, many afflictions of the aged, several bad infections including so-called Legionnaire's disease, and life-threatening mood disorders such as severe depression.

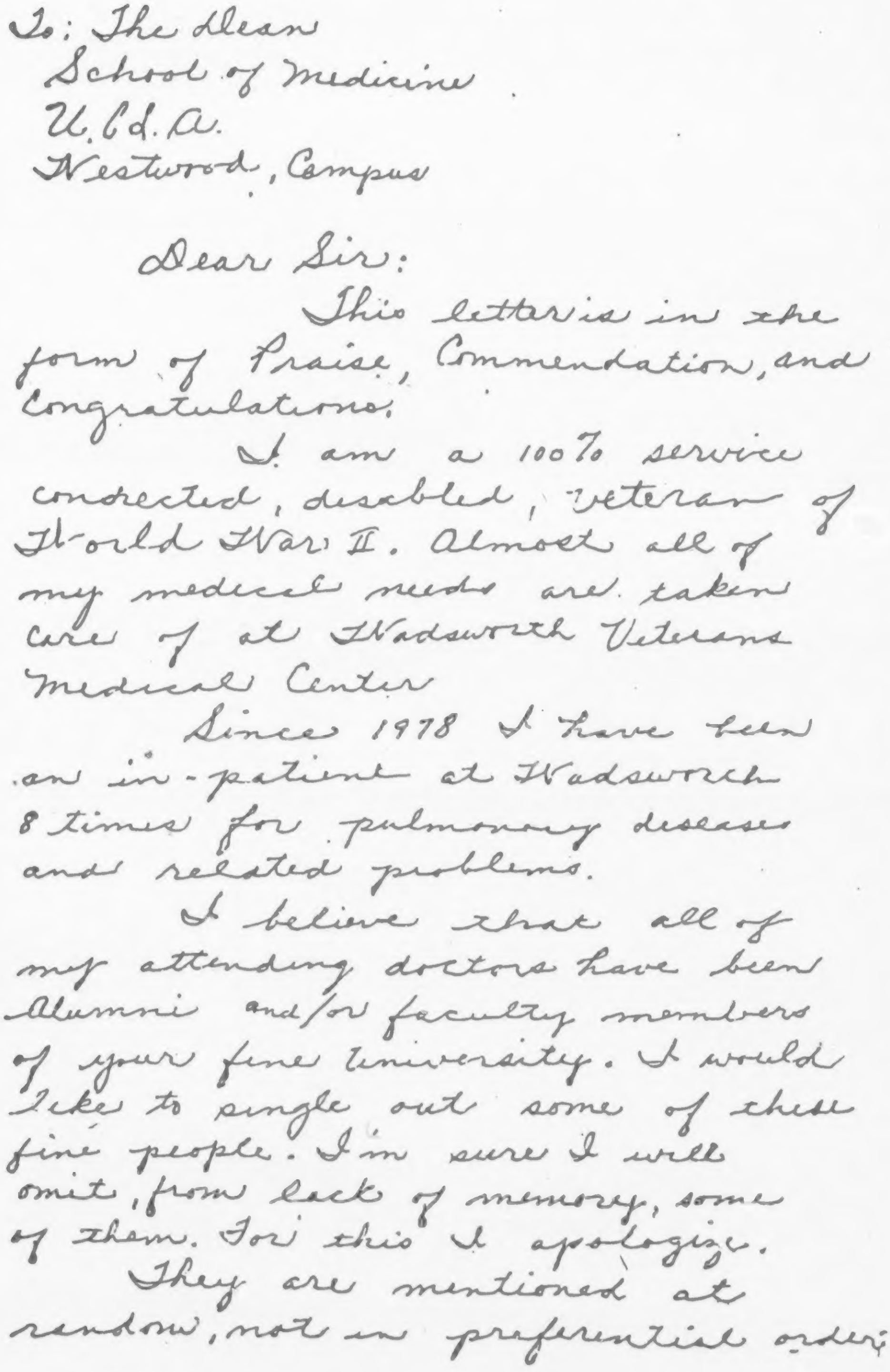
The VA research budget sustained a serious setback in FY 1982; this must be substantially rectified in FY 1983 if the great benefits of science are to continue. Specifically, last year the research account was reduced by more than $11 million from $140 million in FY 1981 to $128 million in FY 1982. This retrenchment, I am told, forced termination of over 200 biomedical and behavioral research grants, 26 rehabilitative engineering research projects and 15 health services programs. Another devasting consequence was the loss of 182 full-time research personnel. Virtually every component of the VA's splendid research effort was adversely affected, including investigator-initiated grants, cooperative studies and numerous other high priority programs. The VA was unable to undertake any new programs and was forced to curtail sharply productive research.

The appropriations requested for FY 1983, some $138 million, represent a 7.4 percent increase over the current level. However, this level does not equal the FY 1981 allocation in current, let alone in constant dollars, and would result in the loss of an additional 200 full-time personnel. Thus, the VA's research enterprise would have been truncated by nearly 400 people, or some 9 percent, over a brief two-year span. Moreover, physicians and scientists who otherwise would be attracted to the VA because of its biomedical research program will be discouraged from undertaking this service. A cascade of lost quality would be more expensive to repair than to avoid. It would signal the dismantling of a thriving research effort that holds enormous promise for improving health care for our nation's veterans.

Summary

The VA medical care and biomedical research enterprise is a vitally important national resource, one that has already sustained more than its fair share of retrenchments. Thus, the AAMC urges that the Committee approve further increases for medical care and boost the research budget in order to insure that the VA will continue to serve the health needs of our nation's veterans and retain its capacity to contribute to the revolution in biomedical science that is generating so much hope in our nation today.

LETTER FROM PHILIP G. BLAIR, BERMUDA DUNES, CALIF.



To: The Dean
School of Medicine
U.C.L.A.
Westwood, Campus

Dear Sir:

This letter is in the form of Praise, Commendation, and Congratulations.

I am a 100% service connected, disabled, veteran of World War II. Almost all of my medical needs are taken care of at Wadsworth Veterans Medical Center

Since 1978 I have been an in-patient at Wadsworth 8 times for pulmonary diseases and related problems.

I believe that all of my attending doctors have been Alumni and/or faculty members of your fine University. I would like to single out some of these fine people. I'm sure I will omit, from lack of memory, some of them. For this I apologize.

They are mentioned at random, not in preferential order;

1. Dr Michael E Mahler, who was an intern and my doctor twice and has seen me many times on subsequent clinic follow up as a resident physician in neurology
2. Dr Eve Gordon who was at the time an intern and now may be a resident. She saw me through an 8 week siege of *pneumonia Aurignalis. She never seemed to sleep, was always on hand and still had time for her other patients
3. Dr. Li Don. Patient, persistent and pregnant. She put her patients first, her own discomfort and well being after.
4. Doctor David Gordon, who was an intern at the time. He was able to treat primary problems first, but recognize and council problems otherwise not evident.
5. Dr Bradley L Williams, another who seemed to forego sleep. always at hand when the need arose. And arise they did...
6. Dr George Richwain, who was, I believe section chief: pulmonary at the time Dr Eve Gordon

attended me. He too was diligent, sometimes making meds things that seemed impossible at the time, but were needed for my recovery.

7. Dr Gregory Feld, ~~who~~ who was in Dr. charge of infectious medicine and later became Chief Resident. He was not only able to listen to what the patient said, but to hear as well. (I hope that makes sense?). They picked the right man for the job of Chief resident.
8. Dr Ono (I dont recall his first name). Untiring, watchful and diligent in his service
9. Dr Adrian IWilliams: I believe him to be a member of your staff, in the capacity of Assist. professor, as well as Dept Head of the pulmonary ward Endowment. Knowagable, available, preceptive, and with a wry sense of humor which makes one feel better, just being near him. His knowlege of pulmonary problems is endless
10. Dr Silveris Santiago, whom I believe to be an Assist.

professor on your staff and also serves as Chief of the Pulmonary Acute Care Ward at Wadsworth. I cannot say enough kind words to describe this fine gentleman. He too has seen one on all hospital stays since 1978 and most of my Clinic follow up visits, as has Dr Adrian Williams and Dr. Daryl Houston, a pulmonary Fellow. I dont know if he, Houston, is a Uclan or not but he is a fine doctor, concincious and devoted to duty. Dr Santiago has saved my life (what else can I say)

As I stated previously I'm sure I missed someone but the 'ol memory "aint' what she used to be"

All of the adjectives I have used for one of the above doctors could be applied to any of the others. The thing that pleased me was their willingness to listen. There was no pre-~~jud~~ judgements - Each treated me as if I knew something of my own illnesses.

I am ever so greatful that they were there when I so desperatly needed them.

You, sir, are to be congratutated for having such a fine staff of educators and for your ability to council and direct them. And your choice of Staff members at Wadsworth is non-pereil. The young doctors whom you have sent to to Wadsworth should be praised for learning so well. They have learned and earned a profession which shall serve human kind for as long as they wish to stay in their chosen field, in that proffession. I for one hope it is a long, long, time, for I am sure that each of them has held my life in their hands.

You all are to be congratulated, praised and commended, and should all feel honored that you were given the ability to earn and learn a proffession, which is one of healing, during a time when violence seems the vogue.

Please forgive the note paper. With out the lines the letter would look some thing like this

Jests aside, Thank you, thank your staff and thank those dedicated students.

Very truly yours

Philip W Blair

LETTER FROM SHERMAN M. MELLINKOFF, M.D., UCLA SCHOOL OF MEDICINE

March 22, 1982

Mr. Philip G. Blair
79401 Bowden Drive
Bermuda Dunes, CA 92201

Dear Mr. Blair:

Thank you so much for your beautiful letter of "praise, commendation, and congratulations" for the physicians at UCLA-affiliated Wadsworth VA Hospital who gave you superb care during your hospitalizations for pulmonary disease and related problems in the last few years.

I'd like to echo you in singing this noble honor roll: Dr. Li Don, Dr. David Gordon, Dr. Eve Gordon, Dr. Gregory Feld, Dr. Michael E. Mahler, Dr. Ono, Dr. George Richwain, Dr. Silverio Santiago, Dr. Adrian Williams, Dr. Bradley Williams. Now we'll have those honorable names at our fingertips!

We greatly appreciate your kindness and thoughtfulness in generously devoting so much time and thought to writing your extraordinary letter. Praising what's good in medicine is as important for achieving excellent medical care as exposing what's bad, and the positive reinforcement radiating from your letter thus makes a valuable and valued contribution to our quest for excellence.

UCLA has prized its cooperative partnership the Wadsworth VA Hospital since 1947. An official VA statement noted in 1959 that "The best medical treatment and hospital care are invariably provided in an environment where the spirit of inquiry and investigation exists in combination with a genuine interest in both teaching and learning. Many years of experience have confirmed the practicality of this policy and have brought to all concerned a satisfying reward in terms of improved standards of medical practice."

Your letter happily confirms our own constant conviction that the foregoing VA statement of principle is as on target now as it was when it was issued 23 years ago!

With best wishes for blessings in health and hope and warmest regards,

Sincerely,

Sherman Mellinkoff

SHERMAN M. MELLINKOFF, M.D.

Senator GARN. Is Mr. Charles E. Joeckel here? [No response.]

Is Robert Lyngh here? [No response.]

Those are the next two on the witness list and, under the circumstances, since we are ahead of schedule, I suggest the subcommittee stand in recess until 3:20.

[A brief recess was taken.]

STATEMENT OF CHARLES E. JOECKEL, JR., DEPUTY NATIONAL LEGISLATIVE DIRECTOR, DISABLED AMERICAN VETERANS

Senator PROXMIRE [presiding]. Mr. Joeckel, you represent the Disabled National.

Go right ahead.

Mr. JOECKEL. Thank you, very much. It seems like old times.

With your permission, I will just summarize my remarks and submit the full text for the record.

Senator PROXMIRE. Fine. The full text will be printed in the record, without objection.

Mr. JOECKEL. Let me begin by stating that the DAV was rather pleased with the President's request for fiscal year 1983, particularly in terms of health care funding and for the benefits and other increases provided in that budget.

We know that it has recently been modified by the Senate and depending on the House that compromise will bring about the funding for 1983 for the VA.

We do note that in both the House and Senate resolutions that practically full funding of the VA's request for 1983 is provided in the first concurrent budget resolution. The only thing that remains to be worked out is the cost-for-living adjustment for veterans.

One special point I would like to make today, you will note in our testimony, we are gravely concerned about the VA's research effort, particularly the prosthetics research.

We find that after the cut was made last year in prosthetic research, that some 22.7 percent of that cut went toward reducing the amount of money available to the VA for prosthetic or rehab engineering research and development.

We suggest that the committee include in its report language that specifically specifies the amounts that you would like the Veterans Administration to fund for that program.

In addition, we are calling for increase, full funding at last year's amount for the VA nurse scholarship program. With that, we, within the realm of the budget resolution, we ask for full funding of the VA request for next year.

Thank you.

Senator PROXMIRE. Thank you, sir, very much. We appreciate that statesmanlike testimony.

[The statement follows:]

STATEMENT OF CHARLES E. JOECKEL, JR., DEPUTY NATIONAL LEGISLATIVE DIRECTOR, DISABLED AMERICAN VETERANS

On behalf of the 715,000 members of the Disabled American Veterans I am pleased to appear here today to discuss the appropriations request of the Veterans Administration for Fiscal Year 1983.

As you know, Mr. Chairman, the Congress has not yet adopted the First Concurrent Budget Resolution for Fiscal Year 1983--setting the overall spending targets for the federal government. We are fully aware of how the work of this Committee is impacted by the ceilings established in the Congressional Budget Resolution. Nevertheless, we will address the President's Fiscal Year 1983 appropriations request for the Veterans Administration cognizant of the possibility that spending in FY 1983 for Veterans' Programs and Services may be further restricted depending upon the action taken in the House and Senate on the First Concurrent Resolution on the Budget for Fiscal Year 1983.

Mr. Chairman, although outlays for the Veterans Administration are projected to rise by less than 1% in Fiscal Year 1983, this budget, in our view, attempts to deal with many of the shortfalls in funding that have occurred in the VA over the past several years.

I refer, of course, Mr. Chairman, to the fact that the VA health care budget is up by some $530 million over Fiscal Year 1982 and to the $137.2 million increase in the Construction Program. We are not yet prepared to say that the Office of Management and Budget has clearly demonstrated its support for the maintenance of a separate system of health care for veterans, but we can say, at least, that, in terms of the federal budget crisis today, we believe the Administration has dealt fairly with the VA Hospital and Medical Care Program.

MEDICAL CARE

Mr. Chairman, we note on Page 6-15 in Volume II of the detailed text of the Fiscal Year 1983 budget proposal that the Veterans Administration's request for Beneficiary Travel is $24.7 million less than the 1982 level. Despite assurances, we are deeply concerned over how such a reduction might impact upon service-connected disabled veterans.

We believe that if the Administration intends to restrict the payment of Beneficiary Travel, then the correct course of action should be taken--that is, to submit legislation outlining the proposal to achieve this cost-savings. Simply under-funding the travel reimbursement account and parceling out funds in a piecemeal fashion leaves no assurance that veterans entitled to the benefit will actually receive it or that the program will be administered fairly and equitably.

Secondly, we find that no funds have been requested to implement the Nurse Scholarship Program authorized by the enactment of Public Law 96-330. As you know, the Congress appropriated $4 million for this program in Fiscal Year 1982 (P.L. 97-101). The absence of these funds in the 1983 budget poses a very difficult problem for the Department of Medicine and Surgery.

Fiscal Year 1982 appropriations will allow the VA to grant scholarship funds to approximately 300 nurses this year. However, training and the achievement of a Degree under a nursing program requires a two year commitment. Accordingly, if funding is not provided in Fiscal Year 1983, the VA, of course, will be unable to meet its obligations under nurse scholarship contracts--therefore, losing both the prior funding and the newly trained nurses' two year commitment to the VA Health Care Program.

For these reasons and others, we would respectfully request that the Committee include in the appropriations provided to the VA in FY 1983, funding at the current level for the VA Nurse Scholarship Program.

The DAV is opposed to the $2.5 million VA request to fund feasibility studies for the contracting out of certain functions currently performed by federal employees within the Department of Medicine and Surgery ($2 million) and for the implementation of a "user's fee" in connection with the care and treatment provided to nonservice-connected veterans not in receipt of VA pensions ($500,000).

As you know, we have already expressed our views concerning the implementation of OMB Circular A-76 with respect to the VA Department of Medicine and Surgery. Frankly, the DAV has no objection to contracting certain minor functions such as general grounds maintenance. However, because of our belief that the contracting out of certain health related functions would adversely impact upon the quality of care provided to veterans, our organization would continue to oppose any contracting of direct or indirect health care services--even if the studies were completed.

Further, Mr. Chairman, should veterans be charged a fee for services rendered and benefits provided by the Veterans Administration? This is the question raised by the Administration's request for $500,000 to study the feasibility of imposing a user's fee upon the health care provided to nonservice-connected veterans and by a legislative proposal contained in the 1983 budget request to charge a .5% origination fee in the VA Home Loan Guaranty Program.

Mr. Chairman, the VA already has authority contained in Public Law 96-330 to limit the treatment of nonservice-connected veterans in VA facilities to only those nonservice-connected veterans who can demonstrate, in fact, that they are unable to defray the expense of such care if it were provided in a private medical facility. Therefore, it seems, that the VA would only be assessing a fee upon veterans already known to be unable to afford health care anywhere else.

We would not argue that the assessment of a nominal fee would result in the failure of a veteran to receive such care and treatment. But we would argue, that as the federal deficit rises so would the irresistible urge to increase the fee well beyond the definition of nominal.

The same could be said about the proposal which would assess a similar fee in the VA Home Loan Guaranty Program. Unlike the health care user's fee, however, the Administration would charge both service-connected and nonservice-connected veterans for the use of their loan guaranty benefits. Frankly, Mr. Chairman, the DAV is opposed to the concept of charging veterans for the benefits they have earned and, it seems to us, at least, that service-connected disabled veterans have already paid the price. We believe that the funds earmarked for these two studies could be better utilized in the Nurse Scholarship Program.

MEDICAL AND PROSTHETIC RESEARCH

Mr. Chairman, the VA request for the medical and prosthetic research account is increased by $9.6 million over the amount appropriated in FY 1982. The total appropriation for FY 1983 is $138 million anticipating salary adjustments for VA employees and increases for equipment, supplies and materials.

As you know, last year the medical and prosthetic research account was reduced by some $12 million from the amount appropriated in FY 1981. The DAV is deeply concerned over the impact of this drastic reduction.

As we have indicated in previous presentations before the Committee, the research programs of the VA are vital to the recruitment and retention of highly qualified physicians and breakthroughs made by the VA in medical research have been beneficial to all Americans. We strongly support full funding of the VA request for the research account in FY 1983 and will make every effort to insure these funds remain intact throughout the appropriation process this year.

However, Mr. Chairman, we are also concerned over the manner in which VA officials applied last year's reduction in the research account. We have learned that in order to accommodate a $12 million reduction in funding, the VA applied a 6% cut in biomedical research projects while assessing a 22.7% reduction in the Rehabilitation, Engineering, Research and Development Program (RER&D).

Falling under the RER&D program is a program of vital interest to the membership of our organization. I refer, of course, to prosthetics research.

Mr. Chairman, in 1948 the 80th Congress authorized the appropriation of $1 million annually for the VA prosthetics research program. This ceiling was removed in 1962 allowing funds to be appropriated in the amounts necessary to carry out the prosthetics research mission.

Since that time, the prosthetics research budget has hovered around $2 million. Last year, for example, prosthetics research was funded at $2.1 million, dropping $800,000 from Fiscal Year 1981. Factoring in inflation, we believe that funding for this account would need in excess of $3 million in 1983 just to keep pace with the appropriations spent in 1981.

Accordingly, Mr. Chairman, we are requesting that funds be specifically earmarked for prosthetic research. This could be accomplished by providing a line item in the VA appropriations measure, separating out from under general research funding the VA's RER&D account--and, by providing specific report language for prosthetic research funding.

We base our request on the disproportionate reductions made in these accounts last year and upon the belief that more research emphasis should be placed in areas such as spinal cord injury, blindness and amputations--conditions which are generally combat related.

ADMINISTRATION'S LEGISLATIVE PROPOSALS

As I stated earlier, Mr. Chairman, the DAV is pleased with most of the funding levels provided in the Fiscal Year 1983 VA appropriations request. We are surprised, however, that the Administration, in order to keep the growth of the VA budget in check, has placed a disproportionate share of the cost-savings burden upon service-connected disabled veterans. Some $165.4 million of the $233.6 million in cost-savings proposals contained in the budget would directly impact upon the benefits provided to service-connected disabled veterans.

Mr. Chairman, three years ago, in discussing the passage of the measure which eventually became Public Law 95-479, the following assessment was made to justify the extension of dependency allowance payments to service-connected veterans rated 30% and 40% disabled:

> We carefully considered...the amount of other income support available to disabled veterans with dependents, such as Social Security Disability payments. We also examined the rationale behind the House action extending prorated dependents' allowances to veterans with 40% disability ratings, that is, that veterans with disabilities rated at 40% may have substantial impairments of earning capacity and needs for additional income support for their dependents.
>
> On the basis of these considerations...we agreed on...the prorated dependents' allowances to veterans rated 30% disabled as well as those rated 40% disabled. The extension of such allowances to 30% disabled veterans was based on the view that the justification for the extension to such veterans was comparable to that for 40% disabled veterans.

Mr. Chairman, two of the legislative proposals contained in the Fiscal Year 1983 VA budget request would eliminate the payment of dependency allowances under the compensation program for service-connected veterans rated 30% and 40% disabled and terminate the payment of additional subsistence allowances under the Vocational Rehabilitation Program for service-connected veterans with dependents. The Disabled American Veterans is strongly opposed to the enactment of this legislation.

We note that in its document entitled: Major Themes and Additional Budget Details, the Office of Management and Budget chose to describe the disabilities in the 30% and 40% categories as, "relatively minor...such as, flat feet, severe chronic laryngitis, severe convulsive tic or a moderate ulcer."

We would point out, Mr. Chairman, that a 30% or 40% evaluation is assigned for disabilities, such as, the amputation of a lower extremity below the knee, the anatomical loss of one eye, and an injury to the skull resulting in a hole larger than the size of a quarter (25¢). Generally, these disabilities are combat related and cannot be described as relatively minor.

The concurrent enactment of these two proposals would have a drastic impact upon the monetary support provided by the Veterans Administration to service-connected veterans who are rated 30% and 40% disabled and who are training under the Vocational Rehabilitation Program. For example, a 30% veteran with a spouse and two children who is attending school, would stand to lose 32% of the VA payments currently provided; if the same veteran had three children, the reduction in VA support would be 36%. Similarly situated veterans evaluated at 40% would lose 30% in VA benefits for the support of a spouse and two children and 34% in overall payments if the veteran has a spouse and three children.

Mr. Chairman, these are not, in our view, slight modifications in the benefits provided to service-connected veterans with relatively minor disabilities. We, therefore, strongly urge the Committee to support the restoration of $165.4 million in the Fiscal Year 1983 budget to maintain the current levels of dependency allowance payments provided to service-connected veterans rated 30% and 40% disabled and to service-connected veterans training under the Vocational Rehabilitation Program.

As the two Veterans Affairs Committees, as well as the two Budget Committees, have already rejected both legislative proposals and the savings associated with them, we respectfully request that appropriate funding for these programs be restored to VA appropriations in Fiscal Year 1983.

We note also that no funding is provided in the FY 1983 VA budget to implement Section 302 of Public Law 97-72 to establish a Small Business Loan Program for Vietnam Era and certain service-connected disabled veterans.

We do know, however, Mr. Chairman, that the current procedures to give extra consideration to Vietnam Era and disabled veterans by the Small Business Administration are not working--thus, the Congress enacted legislation initiated by this Committee which created a new program within the Veterans Administration.

We support and would urge the Committee to recommend full funding of the VA Small Business Loan Program at the level authorized in Public Law 97-72.

When considering the various cost-savings proposals contained in the President's budget...the assessment of a .5% origination fee in the VA Home Loan Guaranty Program, elimination of dependency allowances for service-connected veterans rated at 30% and 40% disabled, to reduce subsistence allowances paid to veterans with dependents under the Vocational Rehabilitation Program and the failure to fund the Small Business Loan provisions of Public Law 97-72...it can be said that these reductions have their greatest impact on younger veterans who seek to buy homes, who have dependent children, who are attending school and who need special assistance in establishing a business.

VETERANS AFFAIRS COMMITTEES' RECOMMENDATIONS

As you know, Mr. Chairman, both Veterans Affairs Committees have rejected some $228 million in cost-savings proposals contained in the President's Fiscal Year 1983 budget request. The two Committees have requested the restoration of funding for virtually all the Administration's proposed reductions in the benefits provided to service-connected disabled veterans.

Their recommendations call for a reduction in entitlement spending of approximately $150 million in Fiscal Year 1983. These savings would be achieved by making adjustments in the benefits provided to nonservice-connected veterans--adjustments which in the Committees' views have the least impact upon sick and indigent nonservice-connected veterans and no impact upon service-connected disabled veterans and their families.

While the DAV certainly does not support reductions in VA programs, considering the economic crisis that affects all federal agencies, we do not object to the overall dollar amount ($150 million) of savings proposed by the House and Senate Veterans Affairs Committees. In addition, Mr. Chairman, I would point out that even though we disagree in part with the manner in which some of these savings would be achieved, we can support the Veterans Affairs Committees' Fiscal Year 1983 budget recommendations.

Accordingly, we respectfully request that you adopt the Fiscal Year 1983 funding recommendations for the Veterans Administration as proposed by the Veterans Affairs Committee.

CONCLUSION

As I pointed out earlier, Mr. Chairman, the DAV believes that for the most part, the President's Fiscal Year 1983 appropriations request on behalf of the Veterans Administration is a good one. Our recommendations seek only to restore $165.4 million in cost-savings proposals which have been rejected by the two Budget Committees and would add only $26.5 million in funding for programs already authorized by the Congress. We will endeavor, Mr. Chairman, to insure that such funding is made available in the First Concurrent Resolution on the Budget for Fiscal Year 1983 in order that this Committee can make the adjustments we have requested.

Together with the recommendations set forth in this presentation, the DAV supports full funding of the Fiscal Year 1983 appropriations request for the Veterans Administration.

This concludes my statement, Mr. Chairman, and I wish to thank you and the members of the Subcommittee for giving us this opportunity to express our views on this most important subject.

STATEMENT OF ROBERT LYNGH, DIRECTOR, NATIONAL VETERANS AFFAIRS AND REHABILITATION, THE AMERICAN LEGION

ACCOMPANIED BY PAUL EGAN, DEPUTY DIRECTOR AND NATIONAL LEGISLATIVE COMMISSION, THE AMERICAN LEGION

Senator PROXMIRE. Our next witness is Robert Lyngh, director of the National Veterans Affairs and Rehabilitation.

You are accompanied by Paul Egan, deputy director for the American Legion.

Mr. EGAN. My role this afternoon is as a liaison.

I would like to introduce our director, the national veterans president, Rehabilitation Commission.

With your indulgence, we will summarize our remarks.

Senator PROXMIRE. Thank you, very much.

Mr. LYNGH. Thank you, Senator. We will, as the present witness did, summarize our testimony and submit the entire statement for the record. We will bring to the subcommittee's attention the presentation we have within the full statement on matters involving program, various program funding for the Veterans Administration budget.

We would like to say that we are appreciative of the opportunity to present our views on the subject for funding for programs administered by the VA for fiscal year 1983.

The first thing we would like to say to the subcommittee at this time when the Government is operating in an atmosphere of fiscal austerity, is that veterans programs are consuming a decreasing percentage of available Federal dollars.

The VA budget for fiscal year 1982 consumed 3.3 percent of the total Federal budget. The budget proposed by the administration for VA for fiscal year 1983 comprises 3.2 percent of the total Federal budget. Bearing in mind the fact that the Nation experienced 8.9-percent inflation last year, it cannot be said the cost of veterans programs is increasing.

The next point we would like to make is that in the opinion of the American Legion, when Congress sets the national priorities for the funding of Federal programs and activities, veterans programs should rank second only to national defense.

We are very much aware that the Federal Government today funds a plethora of programs, each of which has its advocates, who present to Congress what they believe to be compelling reasons why those programs should be fully funded.

We submit, however, that none of these special interest advocates can put forward reasons as compelling as those of the veteran. America's war veterans today represent more than 25 million men and women who have served the national interest in its Armed Forces in four wars in the 20th century.

When a nation goes to war, it commits the ultimate act of sovereignty. To advance its cause it then turns to its citizens, whose duty it is to advance the national cause by force of arms.

The four American wars of the 20th century have been fought by conscript citizen armies. Hundreds of thousands have died, leaving their widows and children behind them. Hundreds of thousands more have been wounded, or otherwise disabled, as a result of service rendered. Many of those who returned have had to endure difficult readjustment periods. Many of them did not successfully tolerate the military experience and continue to have problems in their personal lives.

The programs to assist these returned veterans and the survivors of those who did not return are an identifiable cost of war. And the Government of the United States must be prepared to accept the consequences of its own actions, whatever the cost.

This statement is the basis of our position that veterans programs should be fully funded. We challenge any other special interest group to present a case as compelling as ours.

And we must point out to the subcommittee, in all honesty, that if this Government expects enthusiastic response from the American people the next time it finds it necessary to commit the Armed Forces to action, it had better not turn its back on those who have already served. We hope the subcommittee will pardon our bluntness, but we believe the case must be stated as it is.

The fact is, Mr. Chairman and members, the $26 billion cost for veterans programs today is, as we stated earlier, an inescapable cost of the Nation's wars of the 20th century. The cost of veterans programs is not swollen, other than by the inflation that has affected all other aspects of national life, and for which veterans as such bear no responsibility.

In conclusion, Mr. Chairman and members of the subcommittee, it is the petition of the American Legion that the full amount recommended by the administration be provided for veterans programs for fiscal year 1983.

We state again, as we did earlier, that we will actively oppose any effort to cap or freeze veterans entitlement programs. We state further that full funding, at no less than $7.5 billion, is essential to the viability of the medical care program; that medical and prosthetic research should have restored to it the funds deleted last year; and that medical construction must go forward at no less than the level proposed by the administration for fiscal year 1983, in the interest of maintaining the Nation's investment in the capital plant of the medical care program.

We thank your subcommittee for receiving our views.

Senator **Proxmire.** Thank you. It was forceful and a well-expressed position. And in an area that I think all of us feel we have a very heavy responsibility.

Mr. **Lyngh.** Thank you, sir. We appreciate it.

[The statement follows:]

STATEMENT OF ROBERT E. LYNGH, DIRECTOR, NATIONAL VETERANS AFFAIRS AND REHABILITATION COMMISSION, THE AMERICAN LEGION

The American Legion is appreciative of the opportunity to present its views on the subject of funding for programs administered by the Veterans Administration, for Fiscal Year 1983.

The first thing we would like to say to the Subcommittee, at this time when the Government is operating in an atmosphere of fiscal austerity, is that veterans programs are consuming a decreasing percentage of available Federal dollars. The VA Budget for Fiscal Year 1982, consumed 3.3% of the total Federal Budget. The Budget proposed by the Administration for VA for Fiscal Year 1983, comprises 3.2% of the total Federal Budget. Bearing in mind the fact that the nation experienced 8.9% inflation last year, it cannot be said the cost of veterans programs is increasing.

The next point we would like to make is that in the opinion of The American Legion, when Congress sets the national priorities for the funding of Federal programs and activities, veterans programs should rank second only to national defense. We are very much aware that the Federal Government today funds a plethora of programs, each of which has its advocates, who present to Congress what they believe to be compelling reasons why those programs should be fully funded.

We submit, however, that none of these special interest advocates can put forward reasons as compelling as those of the veteran. America's war veterans today represent more than 25 million men and women who have served the national interest in its Armed Forces, in four wars in the Twentieth Century.

When a nation goes to war it commits the ultimate act of sovereignty. To advance its cause it then turns to its citizens, whose duty it is to advance the national cause by force of arms. The four American wars of the Twentieth Century have been fought by conscript citizen armies. Hundreds of thousands have died, leaving their widows and children behind them. Hundreds of thousands more have been wounded or otherwise disabled as a result of service rendered. Many of those who returned have had to endure difficult readjustment periods. Many of them did not sucessfully tolerate the military experience and continue to have problems in their personal lives.

The programs to assist these returned veterans and the survivors of those who did not return are an identifiable cost of war. And the Government of the United States must be prepared to accept the consequences of its own actions - whatever the cost.

This statement is the basis of our position that veterans programs should be fully funded. We challenge any other special interest group to present a case as compelling as ours. And we must point out to the Subcommittee, in all honesty, that if this Government expects enthusiastic response from the American people the next time it finds it necessary to commit the Armed Forces to action, it had better not turn its back on those who have already served. We hope the Subcommittee will pardon our bluntness, but we believe the case must be stated as it is.

Let us now make the following point. As The American Legion stands four-square for a tightly managed, cost-effective agency to manage those programs. We will support any cost-saving measures that will not diminish the quality or timeliness of service to veterans. In our submittal to the transition team of the new Administration in 1980, we recommended a manpower study of the VA, to determine whether and to what degree manpower savings could be achieved. Something along that line is now being conducted, on its own initiative, by the VA Department of Veterans Benefits. The American Legion is participating in that study, and will support its findings to the extent it agrees with them. We commend the effort of VA in studying its own operations, with a view to efficiency and savings.

Inasmuch as we do not have before us a money bill, we will generalize our remarks at this point to what we perceive to be the most essential needs of veterans programs. In his message to the Congress, the President recommended for the Veterans Administration, for Fiscal Year 1983, Budget Authority of $25.6 billion, and Outlays of $24.1 billion.

With reference to the total figures in the Administration's Budget proposal, we must say we do not believe that VA can fulfull its mission at any lesser amounts. We do believe that in general, the Administration's figures are realistic and provide an adequate guide for the Appropriations Committee in drawing up an appropriations measure.

We would like to offer some comment under the general headings of VA program activities.

READJUSTMENT PROGRAMS

These are programs designed to facilitate the readjustment of returning Vietnam Era veterans. For the most part they are sunsetted programs that will phase out as the readjustment of the Vietnam generation is completed. For example, whereas the FY 81 appropriation for readjustment programs was $2.3 billion, the projected appropriation for FY 83 is $1.6 billion.

It has now been two years since the subsistence allowance for education programs was adjusted. In one of those years there was double digit inflation, and last year there was substantial inflation at the rate of 8.9%. The subsistence allowance should, in all fairness, be adjusted upward. But, of course, it is the same old story; now that the war is over, people just don't want to talk about increasing the cost of readjustment for the returnees. If the nation really wants to end the war, then it should take care, in proper fashion, of those who served, and who are now trying to complete their education so they can get on with the rest of their lives.

ENTITLEMENT PROGRAMS

Entitlement programs, for the most part, comprise compensation, pension and dependency and indemnity compensation for survivors. They must be funded because they are an obligation in law. However, we have a concern about them at this time. That concern relates to proposals, currently circulating in Congress to place a cap or a freeze on certain entitlement programs - but not on others. In that regard, The American Legion would like to make its position clear. This organization will actively oppose any effort to solve the Government's fiscal problems on the backs of the veteran population, by capping or freezing the levels of compensation, pension or DIC, while fully funding other, non-veteran entitlement programs.

The Administration recommended, and The American Legion supports an increase of 8.1% in compensation and DIC levels for FY 83. This amount approximates the inflation level of last year. It is necessary to approve legislation to accomplish this adjustment in view of the indexation of pension and other entitlement programs.

Included in the entitlement programs was the burial benefit of $300 that was payable to all honorably discharged war veterans until passage of the Omnibus Budget and Reconciliation Act of 1981. That Act restricted the burial benefit to those in receipt of compensation or pension at time of death. While we realize that this is not a matter properly before the subcommittee at this time, we do invite you to consider for a moment, the fact that more than half the entire veteran population does not use any veterans benefits at all. Only half use the GI Bill and only a fraction ever receive compensation or pension. Most never go to a veterans hospital, preferring to provide their own health care. But all received the burial benefit, which was designed by Congress to assure that all veterans would receive a dignified burial. Curtailment of this benefit has already resulted in some indigent veterans having to be buried by local authorities. We have recommended to Congress that this benefit be restored.

We should comment here, too, on another Administration initiative that is not presently before the Subcommittee, but that would affect the appropriation of VA. That is the proposal to commence charging a ½ to 1% User Fee to those veterans who are using the VA Home Loan Guaranty. The Administration indicates this charge could provide to the Government as much as $95 million during the Fiscal Year, which monies would go to the General Treasury. The American Legion does not agree with this proposal, for it is our belief that veterans should not be required to pay for benefits earned by wartime service to the nation. Yet, here again is an example of budgetary savings which veterans are asked to absorb in the interest of economy.

MEDICAL CARE

The most sensitive of all veterans benefit programs is the medical care program - because it is adjustable. Through the appropriations act, Congress can provide or withhold medical care to those who seek and need it. In legislation extending over nearly 60 years, Congress has made clear its intent that high quality medical care shall be provided first to the service disabled, and then, to the extent that resources are available, to those veterans who need such care and who apply for it.

The cost of the VA medical care program is high - in FY 83 it will approximate $7.5 billion. But it is also true the VA medical care program is one of the finest, if not the finest, in the nation, and indeed in the whole world. In sixty years, the program has cared for millions of veterans; it has trained nearly half the doctors practicing medicine in the United States today; and it has, through its support of basic research, advanced the state of medical science to the benefit of the entire American people. The achievements of VA medical care during the past sixty years are incomparable. They constitute an investment by the Government, not only in the health of veterans, but in the health of the entire American people.

It is our earnest petition to the Subcommittee that funds for VA medical care not be frozen at this time. VA projects an estimated 1 million inpatient visits and 18 million outpatient visits for FY 83. Certainly no less should be provided for.

And in our petition for this funding we include adequate funds for over-the-counter drugs and for beneficiary travel. These two benefits impact most immediately on the poorest and the oldest of the VA's beneficiaries. To restrict them is to deny adequate care to many veterans who will not get needed care in any other place, but who will just do without it - to their detriment, and the possible shortening of their lives.

There are two items included in the Administration Budget proposal that we recommend be deleted. One is some $500,000 to study the possiblity of Users Fees in the medical care program.

Since there can be no question of charging veterans for VA medical care, there is no point in spending money for such purpose.

The other item is a proposed $5 million to conduct cost comparison studies of contracting-out for VA services in medical care. Congress addressed this issue last year, in legislation that prohibited use of VA funds appropriated for medical care for such cost-comparison studies. What Congress prohibited last year, we do not believe it will sanction this year, and we recommend no funds be appropriated for this purpose.

In discussing veterans medical care, special mention must be made of two other aspects of this program - medical and prosthetic research and construction. In the final allocation of funds for Fiscal Year 1982, medical and prosthetic research was reduced by about $28 million. This was on top of similar reductions in earlier fiscal years, to the point that research has become the poor relation of the veterans medical care program. Its scope has been attenuated to the extent that further reductions will result in its becoming meaningless.

What must be borne in mind here is that VA cannot conduct a high quality medical care program without a viable program of basic research. The best physicians in the nation will not commit themselves to the VA unless they have access to research facilities. This is proven by the significant contributions to American medicine made by VA research through the years. The whole American people are the beneficiaries of VA-sponsored advances in medical science.

The Administration proposes an increase of about $9.4 million in research for FY 83. This is not enough. The entire $28 million reduction of last year should be restored. The American Legion petitions the Subcommittee to do that.

The matter of construction funds is equally important. The Administration has proposed an increase of $130 million in construction funds for VA over FY 82. Most of this is for medical construction. It is badly needed. The capital plant of the VA medical care program is a multi-billion dollar national investment. It is a deteriorating plant. There are hospitals in the VA system that were built prior to World War II. There are even buildings that pre-date World War I. Many other hospitals were built in the years immediately following WW II. They are not presently configured to accommodate the practice of modern medicine. The practice of medicine, as we all know, has changed dramatically during the past 40 years. When many VA hospitals were built there were no such things as dialysis wards and intensive care units; intermediate care wards, and nursing home care requirements. The practice of surgery has also changed markedly. Patient privacy and fire and safety requirements have been updated by the medical profession.

Outpatient clinics have acquired caseloads to an unforeseen degree, resulting in congestion and cramped space for doctors and patients. All these things must be taken into account in maintaining the VA system. Modernization of the system has lagged in recent years, due to fiscal restraints. This is understandable, but it has not resulted in the saving of Federal dollars.

There is one other compelling reason for hastening the renewal of the VA's capital plant. That is the recent action of Congress to designate VA as the principal contingency back-up to the military medical program. The VA medical care program is now a direct national security resource of the nation. In case of an outbreak of hostilities overseas, VA resources would be needed immediately to care for casualities. To do that the system must be up to date and ready to respond to an emergency. The American Legion petitions the Subcommittee to provide the full amount requested by the Administration for VA construction for Fiscal Year 1983.

Mr. Chairman, and Members of the Subcommittee, in seeking consideration by the Appropriations Committee for funding for the Veterans Administration for Fiscal Year 1983, The American Legion is constrained to respond to certain remarks that have been made recently in the halls of Congress about bloated VA budgets. The American Legion categorically rejects these allegations, and challenges those who made them to identify items in the VA Budget that are swollen beyond what is happening to all Federal expenditures due to inflation - which is certainly not the fault of the veterans of this nation.

We of the Legion are confident enough to state that VA is better managed, on a more cost-effective basis than are some other departments and agencies of the Federal Government. Where, for example is the bloat in the readjustment programs for the returning veterans of the Vietnam Era; where is the bloat in compensation for the service disabled, which has only just kept up with inflation; where is the bloat in the pension program, which was reorganized by Congress some five years ago, to insure that veterans pensions go only to those veterans and survivors who are subsisting below poverty level?

The American Legion supported the restructuring of the pension program, in the face of considerable outcry within the veteran community, because the Legion wanted to be able to assure the nation that pensions were going to those who demonstrably needed them. Where, please, is the bloat in the medical care program? Available statistics reveal that VA provides medical care at 15% lower average cost than does the private sector. The escalating cost of medical care in the private sector is a public scandal that has clearly not tainted the VA's ability to provide cost-effective care for its clientele.

To those who charge that VA is providing medical care for millionaires, The American Legion points to a 1977 study by the National Academy of Science that established as fact that the active VA clientele comprises about 3 million veterans - not more than 10% of the entire veteran population, and that these are overwhelmingly single, elderly and poor - that 66% of them have no health insurance whatever when they approach VA to seek medical care.

If there are cost savings that can be achieved by VA through more economical use of manpower, The American Legion is all in favor of that, and has repeatedly said so. By all means let there be a manpower study of VA. If manpower savings can be achieved in managing veterans benefits programs, by all means let us do that. If manpower savings can be accomplished in the medical care program, let us do that also. We are reasonably sure that in the main, keeping in mind the fact that medical care is labor intensive, it will be found that the Department of Medicine and Surgery is not overstaffed.

The fact is, Mr. Chairman, and Members, the $26 billion cost for veterans programs today, is, as we stated earlier, an inescapable cost of the nation's wars of the Twentieth Century. The cost of veterans programs is not swollen, other than by the inflation that has affected all other aspects of national life, and for which veterans as such bear no responsibility.

In conclusion, Mr. Chairman and Members of the Subcommittee, it is the petition of The American Legion that the full amount recommended by the Administration be provided for veterans programs for Fiscal Year 1983. We state again, as we did earlier that we will actively oppose any effort to cap or freeze veterans entitlement programs, absent similar action on all other federal entitlement programs. We state further that full funding, at no less than $7.5 billion is essential to the viability of the medical care program; that medical and prosthetic research should have restored to it the funds deleted last year; and that medical construction must go forward at no less than the level proposed by the Administration for FY 83, in the interest of maintaining the nation's investment in the capital plant of the medical care program.

We thank the Subcommittee for receiving our views.

Senator **Proxmire.** Our next witness is Michael Ainslie, president of the National Trust For Historic Preservation.

Is Mr. Ainslie here? [No response.]

Senator **Proxmire.** Mr. Ainslie is not here.

Is anybody here to speak for Mr. Ainslie on his behalf?

We are a little ahead of our schedule.

Is Mr. Gordon here? Do you mind going ahead now?

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF THOMAS U. GORDON, PRESIDENT, NORTH AMERICAN LAKE MANAGEMENT SOCIETY

Mr. **Gordon.** Not at all.

Senator **Proxmire.** You are president of the North American Lake Management Society, Maine. It sounds like Wisconsin. Maine is almost as good.

Mr. **Gordon.** We really got our start from a number of people in the State of Wisconsin.

Senator **Proxmire.** Did you——

Mr. **Gordon.** And we have looked to a number of our friends in Wisconsin for leadership.

Senator **Proxmire.** You are a perfect witness. [Laughter.]

Go right ahead.

Mr. **Gordon.** Thank you, sir.

The society is designed to assist the local and State water quality managers to build programs that will address the unique water problems of lakes. The North American Lake Management Society is composed of professional lake managers and concerned citizens interested in the future of our Nation's lakes. They have scheduled me here today to represent them to ask in the strongest term for your continued support in funding the Environmental Protection Agency's clean lakes program under section 314 of the Clean Water Act at a level of $15 million for fiscal year 1983.

The clean lakes program is strictly voluntary with 50-percent local support, matching Federal assistance for lake restoration, and it has returned over $8 for each EPA dollar received.

I have submitted for the public record a more comprehensive statement which I understand will be printed.

Senator **Proxmire.** We will be delighted to print the entire statement in full.

Mr. **Gordon.** I will take the next few moments to summarize some of the key points of the statement.

STATEMENT SUMMARIZED

State and local water quality management agencies recognize the importance of lakes but find themselves limited in their ability to control continued lake degradation. Lake problems are often too large and complex for local jurisdictions to handle by themselves. Furthermore, lake problems do not always originate from within the lake, but are often a direct manifestation of pollution carried to it from the area watershed.

States need some Federal involvement and some financial support so that they and local governments can tackle these problems efficiently and effectively.

The States thought they had that Federal commitment for that clean lakes program when EPA finally published program regulations in February 1981.

Up until that time, States were reluctant to dedicate their limited financial resources to become involved in this intensive but necessary pollution control program.

We understand that Federal funding cannot continue indefinitely for programs of this sort and we believe that this is appropriate. However, EPA had committed itself to undertaking a multiphase program for lake restoration in its 1981 clean lakes program strategy.

The first phase of this program involved awarding of grants for diagnostic feasibility studies. It was the understanding of most of the local phase I grantees that the phase I diagnostic feasibility studies would lead to some type of cost-effective lake restoration measure which could then be implemented with EPA phase II grant assistance.

In the past year, however, EPA has not awarded grants to implement grants developed through the phase I studies. Thus, we have many local lake agencies who have committed a substantial amount of matching money to studying a problem, defining the solution, but are now unable to implement that solution due to the lack of continuing Federal support.

However, our society recently initiated a survey of States on their lake management needs. And their sponsors received thus far indicate that: First, there is a need to continue the clean lakes program, perhaps for up to 5 years. Otherwise, early developments on the part of the States in developing their own lake management programs will be wasted.

Second, the States need 5 years as a transitional period to develop their own programs more fully.

And, third, the States require greater assistance from EPA in the form of administrative and technical support.

Finally, most States indicated a need for further research on lake restoration measures. In this regard, we encourage the EPA Office of Research and Development to continue their lake restoration research program at the laboratory indicated in Corvallis, Oreg.

The laboratory had developed a program for statistical evaluation for lake pollution control measures and the study requires $7 million over the next 5 years for completion. We would urge that such funding be made available since the findings developed in this research would be extremely valuable to those of us who are local lake managers to develop cost effective solutions for our lake problems.

I also want to emphasize the importance of having EPA personnel available to administer the program.

From its inception, the program has run with a very small staff with efficiency and minimal bureaucracy. Currently, EPA has no headquarter staff working on the program and only part-time regional involvement.

It is very difficult to maintain a continuing program without program staff to support it.

Let me make a personal note on the effectiveness on the clean lakes program—and I am sure you have many examples in Wisconsin. But in my own State of Maine, I manage a lake—Annabessacook Lake—which in the early 1970's had water of a very green color, about the color of the covers of your hearing handbooks over here.

In the summertime, you could put your arm up to your elbow and not see the tips of your fingers. With the help of EPA's clean lakes grant, we have completely turned that situation around in the last 10 years. The lake is now usable, water quality is excellent, the lake is very clear, and property values and the local economy has benefited significantly.

I say that to indicate that I am not here today to look for funding for my own projects.

I received the funding. I know that it can work and that it has worked in my case and I have fellow lake managers across the Nation who could benefit if this funding were continued for their lakes.

In summary, the clean lakes program is extremely important to State water solution control efforts.

It is the only Federal program to assist States with developing lake management programs. It has a definite end point, but it needs sufficient time to allow development of State lake management programs. The benefits that have been returned are remarkable in terms of an 8-to-1 cost-benefit ratio.

We believe that the program should be supported at $15 million per year for the next 5 years so that its mission can be achieved. After that point in time, we believe that the States will be able to take charge of large management efforts on their own. Even during the current fiscal situation, we believe that the clean lakes program represents an excellent development of public tax dollars for the purpose of environmental protection and we urge your continued support.

Senator PROXMIRE. Thank you for a remarkable testimony, and very, very convincing testimony and a fascinating example of the progress you made and of the payoffs in this program.

Thank you, sir.

Mr. GORDON. Thank you.

[The statement follows:]

STATEMENT OF THOMAS U. GORDON, PRESIDENT, NORTH AMERICAN LAKE MANAGEMENT SOCIETY

Mr. Chairman and Members of the Subcommittee, it is a pleasure to be here today to review with you the importance of continuing a very cost-effective water quality improvement program for dealing with our nation's polluted lakes. The North American Lake Management Society is here today not only to support the accomplishments of the Clean Lakes Program, authorized under Section 314 of the Clean Water Act, but also to focus on the healthy partnership between local, state and federal interests that is created by the program, as well as the very serious lake pollution problems that can only be addressed by such a program.

The Society wants to stress that the Clean Lakes Program should be transferred to the states, once enough experience is developed in lake restoration and protection so that the states may work effectively on lake problems, even with their limited budget capabilities. However, most states are not able at this time to assume the complete responsibility for lake protection and restoration. Amendments to the Clean Water Act will be needed to facilitate this transfer and to improve the efficiency of this nation's water quality management programs.

The North American Lake Management Society is a national organization made up of citizens, lake associations, scientists, and professionals interested in restoring acceptable water quality to our nation's lakes. We presented the case for retaining the Clean Lakes Program last year before this committee, so you are not unaware of the accomplishments and the public support for the program; and you responded to the program by recommending continued funding. This year, the Society wants to stress that the program needs to be continued for another five years at its current authorization of $30 million annually to keep this water quality improvement initiative viable while States obtain authority and appropriations to accept responsibility for lake quality protection. Furthermore, appropriations should not be restricted only to completion of restoration projects presently underway. There are many communities that have made substantial financial commitments to planning for lake restoration projects and have completed diagnostic-feasibility studies.

They deserve an opportunity to implement necessary lake restoration projects. Again, we do not expect federal funding to continue indefinitely, but we strongly believe that a five-year transition period is needed to allow implementation of many of these projects. Likewise, the Society recommends that modest funding be allocated to continue important research work under Section 104(h) to develop and demonstrate improved methods for preventing, removing, reducing, and eliminating pollution in our nation's lakes. Finally, EPA must provide some staffing for the Clean Lakes Program. With a very small staff, the program has been run efficiently and with minimal bureaucracy. Currently EPA has no headquarters staff and only part-time regional involvement to administer these projects.

National Scope of Lake Pollution

Our nation's lakes are in trouble. The President's Council on Environmental Quality has noted that more than 10,000 of the country's publicly owned lakes are in immediate need of pollution reduction or restoration. Of the 3,700 urban lakes in the nation, almost 80 percent have been estimated to have significant water quality problems from toxic substances, algae, aquatic weeds, and sedimentation. Across the country examples of these problems exist in most every state: devastating algal blooms in Deer Creek Reservoir in Utah; PCB contamination in Pine Lake in Arkansas and in Fort Loudoun Lake in Tennessee; low dissolved oxygen and aquatic weeds in McNeely Lake in Kentucky; and serious sedimentation in Moon Lake in Mississippi. The common thread among these problem lakes was an interest in obtaining help from the Clean Lakes Program.

While the nation can be proud of the progress in cleaning up conventional pollutant problems, very little progress has been made in dealing with nutrient overenrichment and toxics problems in our nation's water. The fundamental thrust of the nation's water quality improvement program has been to control pollutants at their source. Unfortunately, this strategy ignores the build-up of pollution problems that still remains after years of few controls. While rivers can recover from past pollution by flushing pollutants downstream (often to lakes and reservoirs), lakes accumulate pollutants and may continue to have water quality problems after the pollution source has been controlled. Only the Clean Lakes Program deals with these accumulated pollutants, and water quality goals set by Congress will not be achieved in lakes across the country unless Congress provides a mandate that a cost-effective lake restoration and protection program be continued.

These lake pollution problems are national problems, rather than just state or local problems. A lake receives pollutants from its entire watershed, which crosses local and state jurisdictions in many cases. In fact, almost 50 percent of our country's land area drain to lakes. Kentucky Lake on the Tennessee River receives pollutants from seven states, more than 100 counties, and hundreds of local jurisdictions. Only basinwide controls of both point source and nonpoint source pollution, involving local, state, and federal cooperation, can solve these pollution problems. Elimination of the technical expertise available on the federal level will cripple lake cleanup initiatives.

Clean Lakes Program Accomplishments

The Society has appeared before you previously and described the beginning of the Clean Lakes Program in 1975 as a demonstration program, and how it struggled to fruition in 1980 with publication of program regulations. We have stated that the program is focusing on priority pollution problems by following a rationale that should be part of other environmental programs: first, states develop a priority survey of problem lakes (classification grant); second, for priority lakes, a diagnostic-feasibility study is conducted to identify the cause of a lake's water quality problems and how these problems can be solved cost effectively (phase I grant); and third, cost-effective projects are implemented, using sound restoration and protection methods (phase II grants). Forty-seven states have participated in the program, 38 of which have completed the priority classification survey. This survey will be invaluable for future water quality management efforts.

Another major accomplishment of this program is that it has focused on implementing lake restoration and lake protection practices rather than just studying problems. Over 87 percent of the total funding has been devoted to implementation, while 7 percent was spent on diagnostic-feasibility surveys. While several national water quality programs have invested huge sums of money to study water pollution problems with little attention to implementation, the Clean Lakes Program has used a fraction of the funding to actually implement practices to protect lake quality.

A 1980 investigation into the costs and benefits of the Clean Lakes Program found it to be one of the more cost-effective government programs. For every dollar expended by the Federal government, eight dollars in benefits to the public were returned. The restoration of urban lakes was most beneficial, with $9.64 of benefits in return for every dollar spent. In rural lakes the benefits were still $6.19 for every dollar spent. The details are available in EPA report number 440/5-80-081, "Economic Benefits of the Clean Lakes Program."

Success stories come from around the nation. In Collins Park Lake in New York, urban best management practices were installed to solve siltation and nutrient problems. In Spiritwood Lake in North Dakota, agricultural practices were encouraged to resolve aquatic weed and algal bloom problems plaguing the lake. Siltation problems were solved in North Park Lake in Pennsylvania, and nutrient and sediment problems contributing to eutrophication in Lake Tahoe were addressed in Washoe County, Nevada. In middle Tennessee near Nashville, a serious nutrient problem in Acorn Lake is being addressed.

My own agency, the Cobbossee Watershed District in Winthrop, Maine, has made substantial progress in restoring its lakes. Ten years ago, the visibility of Annabessacook Lake was less than 2 feet, with a heavy scum of blue-green algae throughout the summer. Today, those scums are gone, the water is clear, and the local economy is benefitting from a natural resource that once seemed lost. None of this would have been possible without the help we received from the Clean Lakes Program.

The Clean Lakes Program is a high-yield, low-cost water quality improvement program that has as its root an effective mechanism for getting local, state, and federal interests to cooperate in solving specific water quality problems. The program is voluntary and must be initiated by local or state interest. The 50-50 matching grant requirement for implementation projects ensures active participation by requiring substantial local and/or state investment in the project.

Congress believed that it was only through a local, state, and federal partnership that the objectives of lake restoration and protection could be achieved, and EPA made the partnership part of the Clean Lakes regulations. While federal leadership, encouragement, and technical assistance is needed to see the projects through to completion, local involvement helps to tailor implementation approaches to what will be successful in a given area. The success of these cooperative clean-up efforts has been a catalyst for other community activities, some environmental, some not. Ask your constituents! In a time when government spending is under increased public scrutiny, this program is universally popular among participants because they have an important role in determining project success.

Status of Clean Lakes Projects

EPA has advised the states they would not continue the federal funding aspect of the program indefinitely; this is appropriate. EPA stated clearly in the 1981 program strategy that the program goal was "to restore or protect a lake within 25 miles of the 280 major population centers." Approximately 50 areas corresponding to this goal have now completed or initiated lake restoration (phase II) projects. Perhaps another 50 centers would be included if implementation of pollution control and restoration measures defined in existing EPA diagnostic-feasibility (phase I) studies were financially supported. It was the understanding of grant recipients that they would get financial support when they undertook the study. Most of these studies have been completed or will be completed soon. Based on the average size for grants previously implemented by EPA, these new projects would require approximately $25-30 million to implement. Also, with a modest amount of program administration and support by EPA during the next five years, we believe at least one-half of the remainder of the goal can be achieved. This would represent another $45-50 million federal funding needs. Finally, we believe EPA and the states should have discretion in choosing additional Clean Lakes Projects that may be sited within an area that already has a project or one outside a metropolitan area. We foresee the strong possibility that some larger cities may require more than one good quality lake to handle its population needs. Furthermore, important lake interests in rural areas must also be considered. Such projects may cost an additional $5-10 million. In summary, we recommend that $75-90 million be appropriated for the Clean Lakes Program during the course of the next five fiscal years.

State Agency Survey - Can the States Take Over?

The North American Lake Management Society recently sent a questionnaire to state agencies that have participated in the Clean Lakes Program to determine what the impact of no funding for Section 314 would mean to them and whether their states could assume lake restoration and protection responsibilities. We received responses from across the country, from Connecticut to California and North Dakota to Arizona. The states are adamant that failure to fund the 314 program will cripple their fledgling lake quality management efforts and would break faith with those communities and states that invested in surveys and public participation to satisfy requirements of the 314 program. Here is a sample of what the states are saying:

Connecticut:	". . . staff will probably be reassigned to other functions, unrelated to lakes - loss of a valuable human resource. Implementation of recommendations from six phase I studies will be difficult, or impossible."
Louisana:	"Considering the increased incidence of reported lake degradation, a discontinuation of Clean Lakes funding, would severely limit the state."
Virginia:	"State funding would not be available for the support of lake restoration projects."
California:	"We have identified 186 lakes which are in need of restoration. It is likely that there will be difficulty completing the two restoration projects actually started without further Federal funding."
Iowa:	"Prior to the Clean Lakes Program . . . improvement and restoration of public lakes in Iowa received little attention. Lack of federal assistance will severely jeopardize Iowa's ability to improve and restore the quality of public lakes."

Massachusetts: "Severe impact . . . the cost is out of reach for local communities, even with possible 50 percent match from the state program."

The states by and large are willing to accept a delegation of the Clean Lakes Program from EPA if some funding is provided. They are not prepared or willing to take over the sole responsibility of public lake protection, management, and restoration at this time. Only a handful of states have state matching grant programs to assist local communities in lake quality management. States want to participate, but they need time to sell the program to their legislative bodies. The North Dakota Department of Health writes: "(North Dakota) recently developed enabling legislation and an appropriation for lake restoration; however, this was under the assumption of continuing 314 funding. Most of the lakes in North Dakota are eutrophic or hypereutrophic, and the future, without an active lake restoration program, does not look bright. The anticipation of a fair chance of funding these projects has seriously ended the trust placed in EPA, and has dealt a psychological blow to these individual lake groups." During this time of federal-state tensions, trustworthy relationships need to be preserved and embryonic state lake quality programs need to be supported.

The result of action to cut back the Section 314 Clean Lakes Program will not only be a perpetration of existing lake quality damage but also a continued loss of the nation's valuable lake resource, as suggested by the following state comments:

Massachusetts: "We expect cultural eutrophication to accelerate rapidly in the state."

Florida: ". . . lake management problems and their associated water quality problems will continue to increase in number and severely as population grows."

Wisconsin: "The probability is that 20 percent of the 3,200 lakes (in Wisconsin) have already reached the stage where their conditions diminish their recreational value."

New Jersey: "Developmental pressures will continue to produce water quality degradation."

Program Evaluation and Research

Most states indicated a critical need to further develop and improve the tools for assessing lake quality problems and restorative measures. In this regard, we strongly encourage EPA's Office of Research and Development to continue its lake restoration evaluation program, initiated by the laboratory located at Corvallis, Oregon. The laboratory has developed a $16 million statistical experimental design that would provide an evaluation of pollution control and restoration techniques while considering pollution sources, lake type, and geographical location. The design requires $7 million over the next five years for completion. NALMS strongly urges this subcommittee to appropriate that sum of money under Section 104(h) of the Clean Water Act for this purpose. The knowledge developed would be extremely valuable to lake managers as they attempt to choose cost-effective pollution control and restorative measures for their particular lake.

Why Keep the Clean Lakes Program?

Solutions to lake water quality problems are complex, often cover many political boundaries, involve numerous disciplines, and require high levels of technical expertise. Congress enacted Section 314 to serve as a foundation for state programs. Finally in 1980, EPA brought the concept from an experimental program to one the states could build upon, and some states responded by initiating programs. Now, only several years later, these states which have become responsive to Congress and to the needs of citizens for good quality water once again face the task of development of legislative and regulatory authority without the necessary federal guidance, expertise, and support. If this Subcommittee does not recommend a continuation of Section 314 efforts, it will pull the rug out from under these state initiatives, which will in effect end or substantially delay many lake quality management and protection programs in our country.

Why keep the program? Simply, it has been overwhelmingly successful in cleaning up and protecting the lakes it has addressed in its few short years of existence. It stresses on-the-ground implementation--not studies and not building of EPA staff. It is the only water quality program that incorporates both point source and nonpoint source controls on a comprehensive watershed basis to achieve Congressionally mandated clean water goals, and it is the only program that actively addresses in-place or accumulated pollution problems. It is not a government give-away program; instead, its 50-50 matching grant implementation program stretches the federal dollar and requires extensive local and state investment to make the project a success.

The Clean Lakes Program has promoted a healthy cooperative relationship between local, state, and federal interests; and it has been one of the most cost-effective federal programs on record, returning well over $8 for every federal dollar invested. Lake quality problems are national in scope; there is a need for federal participation in coordinating the diverse political jurisdications that may exist in large watersheds. Foremost, states are slowly beginning to develop institutional frameworks to administer lakes programs. A federal presence is needed for the next five years to provide technical expertise and to encourage states to assume this responsibility in an orderly fashion. If we are to maintain any federal water pollution program whatsoever, then we must address the unique water quality characteristics and problems of our nation's lakes within that program.

Each of you is aware of the latest public opinion polls on environmental quality. Americans clearly want and deserve clean lakes and reservoirs for safe drinking water, recreation, industrial use, and aesthetic enjoyment. More than half of our nation's population lives within five miles of a publicly owned lake! This public demand for clean water is increasing, and the Clean Lakes Program has had more requests for funding that there is money available. It has not generated a bureaucracy; it deals only with priority pollution problems on a voluntary basis, without complicated regulations; and it has brought great benefits and pleasure to our nation's citizens. Our nation's lakes have suffered terribly from pollution; at least one-third are severely degraded, and many more are now deteriorating. The North American Lake Management Society urges the Subcommittee to continue the Clean Lakes Program in FY 1983, for we have a clear indication from the States that lake restoration and protection will diminish substantially in the United States without this modest funding.

Recommendations

NALMS recommends that:

- The Clean Lakes Program be provided appropriations at $15 million per year for the next five years.
- The Environmental Protection Agency be directed to provide the necessary personnel to assist the states with this important pollution control program over the next five years.
- The Environmental Protection Agency be directed to continue its reports to Congress on the current state-of-the-art of lake protection and restoration procedures every two years, as required by Section 304(j) of the Clean Water Act, and
- The Office of Research and Development of the Environmental Protection Agency be provided a total of $7 million in appropriations during the next five years under Section 104(h) authority to complete the evaluation of lake restoration procedures and publish a complete analysis of the results by 1988.

The Society believes that the recommended expenditure of federal funds is essential if we are to provide the states and the nation a basis to ensure the proper protection of this nation's vital lake resources into the future.

Thank you for your consideration. This concludes my written statement.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

STATEMENT OF MICHAEL L. AINSLIE, PRESIDENT, NATIONAL TRUST FOR HISTORIC PRESERVATION

Senator PROXMIRE. Has Mr. Ainslie arrived, the president for National Trust For Historic Preservation?

Mr. AINSLIE. Mr. Chairman, we appreciate being able to testify on HUD appropriations today.

The national trust in recent years has broadened its concerns significantly beyond the landmark and monument houses and properties throughout the country, and we now see as our domain the involvement of historic preservation as an active movement nationally involving more than 2 million people in this country in the provision of safe, decent, livable communities throughout the country.

We see as our area of concern the now 1 million buildings which are listed in the National Register of Historic Places. I think in the past, historic preservation has been seen as somewhat narrow, perhaps even elitist at times, involvement.

We are working hard to make historic preservation work for all parts of communities—low-income residents as well as those concerns with the monuments and important landmark facilities in our communities.

And so we appear today testifying on behalf of some HUD programs and we would like to give a bit of background how the trust is working in innovative private-sector solutions, although in various cases various use programs of HUD become involved in these efforts—two that I would like to highlight.

Some years ago, in the Midwest, the national trust was approached by a community saying that their main street was in decline and demise. They were seeing quick vacancies as suburban shopping malls came and they needed help. Our trust Midwest regional office in Chicago decided not to just sent them a letter in response, but rather to really initiate a program and the main street program was born from this effort.

We took three communities—Hot Springs, S. Dak., Dalesburg, Ill., and Madison, Ind.—and in the matter of 3 short years having funded, project managers have literally turned around declining main streets and have made then once again vital centers of those communities.

That program achieved such success in 1980 with the administration giving some minimal support. We selected six States and those six States are now each with five towns participating in the national main street program.

HUD, funding through various programs—principally the community development block grant and 312 housing rehabilitation programs—have been extremely helpful in the local level support for this effort.

The 30 towns are now experiencing a rebirth. Increased new development in the downtown historic district is truly bringing back the center of these communities to live.

Second, the trust last year initiated a very exciting program in low-income historic districts to provide decent housing for low-income residents for these historic districts. It is called the inner-city fund.

We began with this small grant from the Secretary of Interior. Today we raised $500,000, most from private loans, to give grants and loans to beginning buying and rehabilitation housing.

So far we have given 11 such grants and loans to neighborhood organizations and to us some very exciting statistics are resulting.

We have rehabilitation housing units at a cost of only $27,000 a dwelling, that is buying and rehabilitating, a figure that is substantially below in number that HUD is able to generate in its programs.

However, it is important to note that most of the communities are using local community development block grant funds to supplement our land and loan funds and private-sector loan funds to bring about these programs.

So the discretionary funds at local level are critical. So far we have 170 neighborhoods applying for this program and had we been able to fund them all—we rehabilitated almost 3,000 dwelling units retaining them for low- to moderate-income occupancy—$130 million rehabilitation would have resulted. We have only, unfortunately, been able to fund approximately 10 percent of these requests.

We also have been frequently critics in the past of UDAG program because it, unfortunately, began somewhat like urban renewal, more frequently tearing down historic resources than rehabilitating them.

Fortunately, the administration of the program at HUD has been responsive and increasingly now those programs, those grants, are involved in preserving historic resources. And we do encourage your committee to consider retaining funding for the UDAG program at its current level.

We have seen in city after city now that UDAG is, in fact, preserving historic resources and leading to new development, new job creation, economic development in the downtowns of hard-pressed communities.

Finally, I think in closing, we realize that increasingly the 27 million dwelling units in this country which are in excess of 40 years old are increasingly in need of rehabilitation and funding. It is not a secret to any of us that the private sector is simply not coming forth with funding at this point, principally due to interest rates, but housing costs and rehabilitation costs, particularly for low-income people, simply is not able to come forth from the private sector in adequate levels. We are doing our part, we think, to try and focus our efforts on all sectors of the housing market.

We hope that your committee will continue to see its responsibility to provide some level of flexible support for cities to continue to meet the housing problems of their communities.

Thank you, very much.

Senator Proxmire. Thank you, very much, Mr. Gordon, for a fine statement and your statement will be printed in full in the record.

Very impressive.

[The statement follows:]

STATEMENT OF MICHAEL L. AINSLIE, PRESIDENT, NATIONAL TRUST FOR HISTORIC PRESERVATION

Mr. Chairman and members of the Committee, the National Trust is grateful for this opportunity to appear before you to discuss the Fiscal Year 1983 budget for the Department of Housing and Urban Development.

As the Congressionally chartered leader of the nation's private historic preservation movement, we feel a special responsibility to speak out in support of this Congress' bipartisan commitment to provide safe, decent and livable communities for all Americans. We believe that historic preservation is contributing to this goal.

However, we are realists. We know that we cannot do the whole job ourselves. We need to work in partnership with government, especially using the programs of the Department of Housing and Urban Development, to achieve the complementary goals of historic preservation and community revitalization.

The National Trust is proud of its innovative demonstration programs that are aiding urban revitalization efforts and that are creating housing opportunities for citizens of all income groups. Among these is our National Main Street Center. Since its creation in 1979, aided by a seed grant from the Department of Housing and Urban Development, the Center has initiated public-private partnerships with 30 cities and towns in six states. The National Main Street Center works with local businesses and governments to establish practical plans to revitalize historically and architecturally significant downtown areas. Much has been said about the plight of main street. The National Trust is doing something about it.

The Inner-City Ventures Fund, begun less than two years ago, is already establishing an impressive track record of housing creation and neighborhood revitalization in the low-income, minority areas of our cities that contain so much of our historically important building stock. To date, the Fund has made modest grants and loans to a variety of projects that will benefit current residents and reduce displacement.

The Fund reflects our commitment to make the value of preservation available to all Americans. The Fund's record of housing creation is especially noteworthy. In nine housing projects supported to date, 277 units are being created at a cost per unit of approximately $27,375. Of this amount, our Fund contribution has been just $2,300 per unit in grants and loans. This impressive leveraging has been made possible by the use of not-for-profit neighborhood groups as the housing provider.

With more resources we could do more. The 170 applications we received for the Fund's first year promised the creation of 2,880 residential units and 54 rehabilitated commercial buildings. The projects we have been able to assist thus far, and the potential reflected in the applications received, give us the confidence to seek greater private support for the program.

These programs, and others, have brought the Trust favorable recognition as an organization actively addressing our nation's urban ills. Most recently, the National Trust was singled out for praise by the President's Commission on Housing. The Commission endorsed the efforts of the National Trust to further the goals of private sector preservation. The Commission's report highlighted several of the Trust's activities, including the Inner-City Ventures Fund.

While we are proud of the private initiations spurred by the Fund and the National Main Street Center, we also know that their successful implementation would not be possible without the assistance of the federal government. Beyond its initial grant from the Department of Housing and Urban Development, the Main Street Center has been privately supported. However, local implementation of the comprehensive plans the Center helps to develop in the 30 cities are often dependent for success on several of the programs of the Department of Housing and Urban Development. Specifically, many of the cities and towns are utilizing Community Development Block Grants and Urban Development Action Grants to provide related public infrastructure improvements and to improve public spaces. In addition, CDBG funds have been used to hire local experts to aid in planning efforts. Our Main Street Cities have also utilized Section 8 funds for downtown housing that is a crucial element of many downtown revitalization plans.

The local organizations using the Inner-City Ventures Fund are also often dependent on public funds to leverage private commitments. Of the housing projects noted above, the public share (federal, state and local) has amounted to just $9,990 per unit. Significantly, the majority of public contributions are one time subsidies without the burden of future funding commitments to guarantee developer profits. This is a very small, yet crucial contribution that enables our projects to compete successfully for scarce private investment dollars.

It is the record of these programs that are before the Committee today. It is also a record of private success in partnership with the federal government. We, and the local governments and organizations that we are working with across the country, are trying to keep up our end of the partnership. Congress should continue support of those HUD programs that maintain the federal government as an active, efficient and successful partner.

We urge the Committee to provide adequate funding for the Community Development Block Grant Program at not less than its existing level of $3.456 billion. Block Grant funds are being used at the local level for a variety of historic preservation and housing rehabilitation projects throughout the nation. Preservation is one of seven national priorities for Grant uses. In fiscal year 1981, more than $12 million of CDBG funds were used for projects categorized as historic preservation by HUD and approximately $750 million more was committed to the rehabilitation of older and historic housing.

The effectiveness of the Block Grant program is threatened. Inflation has lessened the real value of the CDBG dollar. More cities have become entitled to grants, thus decreasing the funds available to eligible areas.

Finally, with the potential elimination of other programs contributing to housing and community development, including the threatened elimination of historic preservation funding through the Department of the Interior's Historic Preservation Fund, new demands will be placed on the CDBG pool of funds. Consequently, the Block Grant Program must do more with less. Therefore, we urge the Committee to support adequate funding for this program.

Preservationists have been among the Urban Development Action Grant Program's sharpest critics where major development schemes have failed to consider the valuable historic resources of an area. At the same time, the UDAG program has proven its ability to create jobs and spur economic revitalization. Increasingly, UDAG funds are being committed to preservation projects that do just that so well. An analysis of HUD's most recent announcement of UDAG awards shows that approximately 20% of the funds were awarded to projects that further historic preservation goals. The Department should be proud of this record. Therefore, Mr. Chairman, we urge the Committee to continue support the UDAG programs at not less than its existing level of $440 million.

Another program that we feel is deserving of this Committee's support is the Section 312 rehabilitation loan program. Last year, the Congress voted to continue the program utilizing monies repaid from the program's revolving fund. If, as last year, this Committee cannot appropriate additional funds for Section 312 loans, we urge you to allow again the fund to utilize repayments to make new loans. We have witnessed first-hand the value of these low cost loans to rehabilitation and preservation projects at the local level. With continuing high interest rates forecast at least through the coming fiscal year, we feel that it is crucial that this pool of lower cost loan funds exist so as to bring the benefits of housing preservation to low-income residents of our cities.

As you are well aware, Mr. Chairman, decent housing is still beyond the reach of many Americans. The preservation movement, too long identified with saving old buildings as museums, is working to support the complementary goals of preservation and housing creation for lower income Americans. Almost 27 million housing units in this country are over 40 years old. This represents approximately 32% of our entire housing stock. Part of this vast older housing stock consists of many of the more than one million buildings that have been placed on the National Register of Historic Places or are located in over 2,600 National Register Historic Districts. Many of these buildings are located in depressed areas of our nation's cities and rural counties.

Our Inner-City Ventures Fund, which I described earlier, is an innovative model for housing creation within the context of historic preservation. However, as the President's Commission on Housing noted, affordability is a key problem. The National Trust, local preservation groups and other non-profit organizations cannot adequately address this problem. Neither can many states and cities which are faced with shrinking tax bases and increasing numbers of dependant poor.

We, as preservationists, believe that there is a continuing role for the federal government in ensuring the provision of decent, safe, and affordable housing for the less advantaged members of our communities.

Additionally, our experience shows that for many areas, scarce federal dollars are best directed to the rehabilitation of our existing housing stock as opposed to new construction. Rehabilitation prevents the needless waste of resources that occurs when a structurally sound property is demolished. The energy, labor and financial investment embodied in older structures is a scarce national resource that we must not squander.

An important incentive for the rehabilitation of older and historic structures is the tax incentives offered through the Economic Recovery Tax Act of 1981. Passed with the strong support and technical assistance of the National Trust, the new law offers the owners of income producing property a sliding scale of tax credits for the rehabilitation of their property. The largest credit, 25%, is reserved for buildings that are on the National Register of Historic Places or are located with National Register Historic Districts. Residential rehabilitations are only eligible for an investment credit if they take place within an historic structure. The tax incentives are already showing impressive results in the creation of housing. Much of this housing has been occupied by low and moderate income renters. This has been made possible through the use of federal programs to supplement the rent of tenants and to provide a rehabilitator with below market financing.

While preservation projects have often utilized the Section 8 moderate rehabilitation and substantial rehabilitation programs, we are not wedded to any particular vehicle for providing housing assistance. We are only concerned that, whatever method is chosen, adequate funds be committed to subsidizing the housing costs of our poorer fellow citizens. We further urge that, in making your appropriations decisions, you pay special attention to funding those programs that will aid in housing rehabilitation in areas of our nation where there exists a stock of unused, underused, or substandard housing.

Many communities across our nation are ill, Mr. Chairman. The symptoms are both physical and spiritual. Physically, many areas of our nation's cities are deteriorating before our eyes. Arson, abandonment and disinvestment are taking a heavy toll. Housing units, buildings and even entire neighborhoods are the casualities. We know this, Mr. Chairman, because preservationists are working in these areas every day to try to stem this blight.

Spiritually, the cost is greater although the symptoms may not be quite so visible. They are despair, hopelessness and frustration. It is not just buildings that we are losing, it is also people. We know this, Mr. Chairman, because these people are part of the preservation constituency. One does not have to be wealthy or live in Georgetown to be a preservationist. One only must care about the place he lives and the quality of life he shares with his neighbors. These are the preservationists that we have come to represent before you today.

The programs of the Department of Housing and Urban Development in partnership with the efforts of private preservation groups have helped reverse the physical and spiritual deterioration of our nation's historic urban areas. We appeal to you today to maintain these programs at adequate funding levels so that we can go forward to save the physical and spiritual fabric of our nation's historic areas for the people who inhabit them.

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF NEIL SAMPSON, EXECUTIVE VICE PRESIDENT, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Senator PROXMIRE. Our next witness is Mr. Sampson, the executive vice president of the National Association of Conservation Districts.

Mr. SAMPSON. I would like to open my statement today, by asking that you insert some missing column heads in the testimony that we submitted.

Senator PROXMIRE. Missing column heads?

Mr. SAMPSON. Yes. Unfortunately, I just noticed we have three columns of numbers and nothing at the top to give you a first clue. That makes decisionmaking much easier.

The left column, the first column, is on the left is 1982 fiscal year funding for those programs.

The center one is the President's budget proposal; the one on the far right is our fiscal year 1983 recommendation as adopted by our council.

Senator PROXMIRE. That puts you at the right of the President.

Mr. SAMPSON. Yes, sir.

We would appreciate it if you would put those headings on and we apologize for the absence.

I am Neil Sampson, executive vice president of the NACD. Those other recommendations that our annual council adopted last winter in Phoenix, Ariz., reflect a strong feeling on the part of our members that those environmental programs that have had State and local organizations solve their own programs at the local level have, in fact, worked on do, in fact, need to be continued.

The three programs we have chosen—water quality management program under 205; and the Clean Water Act, the clean program 314, and the State program grants under section 106—have been very useful to conservation districts who have, in many States, been designated as the management agency for the control of nonpoint sources of pollution for agricultural lands and construction activities.

Because of this involvement, conservation districts are concerned that the Federal Government keep up its commitment to the goals of the Clean Water Act. We worked our way through those difficult years of planning under section 208.

Now that is done, the time has come to do the job, but obviously that is going to take some commitment. It is going to take some funds.

The clean lakes program under the provision of section 314 has proven to be particularly valuable for cleaning up of nonpoint sources of pollution upstream from inhabitable lakes.

Conservation districts are very much involved in this and recommend the continuation of that program at the level of $12 million.

Mr. Chairman, we appreciate your time to let us come before you. We know what a difficult thing you got with the entire budget. We realize our concerns are very minor, but out in the countryside where these programs have been doing a considerable amount of good, they are not so minor, they are a pretty major part of the local.

We can appreciate any consideration you can give to us.

Senator Proxmire. Thank you, very much. We appreciate your testimony.

[The statement follows:]

STATEMENT OF NEIL SAMPSON

ENVIRONMENTAL PROTECTION AGENCY

	Fiscal year—		
	1982	1983 Budget proposal	1983
Water quality management planning (205j)	$24,000,000		$24,000,000
Clean lakes program (314)		$9,000,000	12,000,000
State program grants (106)	40,000,000	51,200,000	55,000,000

Mr. Chairman, members of the subcommittee, I am Neil Sampson, executive vice president of the National Association of Conservation Districts. The recommendations we bring you today are those that were adopted by our national council at our annual convention in Phoenix, Ariz., this past February. They reflect a strong feeling on the part of our members that the Nation's environmental protection programs are not being adequately funded, not being given a national priority in keeping with their importance to the well-being of the citizens of this great Nation.

Our member conservation districts are subdivisions of State government, organized under State statutes. They are mandated to develop and implement programs within their jurisdictions for the conservation of soil and water resources, including reduction of sediment loads in their lakes and streams. Because of this responsibility, conservation districts have been very much involved in the development of areawide water quality control plans under the provisions of section 208 of Public Law 92-500.

In many States, conservation districts have been designated as the management agency for the control of nonpoint sources of pollution from agricultural land and from construction activities. Many States have made additional State appropriations for cost-sharing with landowners for the installation of best management practices.

Because of this involvement, conservation districts are concerned that the Federal Government appears to be walking away from its former commitment to the goals of the Clean Water Act. Now that the planning under section 208 is nearing completion, we think the time has come for implementation. We urge the Congress to appropriate the requested funds for water quality management planning and implementation.

The clean lakes program under the provisions of section 314 has proven to be a valuable instrument for cleaning up nonpoint sources of pollution upstream from inland lakes. Conservation districts have been very much involved in this program and recommend continuation of funding at a level of $12 million.

We thank you for this opportunity to present the views of this association.

STATEMENT OF ROBERT FLACKE, COMMISSIONER, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, SPEAKING ON BEHALF OF PETER LANAHAM

Senator PROXMIRE. Next is Robert Flacke, speaking for Mr. Lanaham.

Mr. FLACKE. We got copies that we have submitted to you but would like to generally summarize concerns regarding the Environmental Protection Agency's budget for this forthcoming year. I am here to share New York's grave concern about the administration budget proposal for the Environmental Protection Agency, especially about the reductions which the administration proposes to make in the 1983 environmental proposal grants to the States.

The examination of the effects of the proposed budget upon our environment programs shows that as early as 1984 there will be areas in which environmental protection is reduced below acceptable levels unless the basic EPA funding is maintained at 1982 levels and, in some programs, briefly cut are restored.

Further efficiency in environmental programs will not follow from the administration proposals. Paradoxically, the need for Federal involvement in State programs will grow, not less, as States turn back the EPA delegated Federal program.

I believe that we can lose a great deal of the progress of the last decade. Controls are eased and it is only a matter of time before we see a return to some of the air pollution incidents and the water incidents that outraged the Nation in the 1960's.

In New York, for example, we anticipate the loss of half of our air pollution monitoring capability. This will severely damage our early warning system to detect unhealthy air. It will not allow us to continue to track interstate transport problem. Further, 50 percent of the Federal funding which was planned at the beginning of the decade for construction of sewer treatment facilities has been eliminiated. This will mean that more than 100 plants which New York needs will never be built and 40 others will reach only low levels of treatment.

The most important issue is the control of toxic substances. It is even more expensive than controlling regular pollutants and demands greater Federal support. Instead, the administration proposed budget will significantly cut toxic and hazardous waste control. Loss of needed Federal support for air and water discharge control, pesticide enforcement, and for the planned comprehensive and integrated program to prevent unsafe disposal of hazardous waste will make it impossible for my department to prevent repeated incidents of environmental contamination. We expect to lose one-half to three-quarters of our planned effort to establish limits for toxic air emission. We fear that in a year or two we will be forced to abandon our pioneering program to develop limits on toxic substances and water discharges. We will have to rely on EPA, which is already behind schedule, in setting these standards and also suffering deep budget cuts.

We have been trying to work out a balanced program on hazardous and toxic waste management, specifically in the area of controlling the old site problem, generators, the transporters, and the disposal industry.

We have been working for the past 18 months on interim authorization. This internal authorization plan was essentially a plan and it had as its basis, the growth in both State and Federal funds from approximately $3.5 million to approximately $10 million by 1986.

Instead of any growth in this plan, based upon the EPA proposal, we now find that there is a 16-percent reduction. This leads us to the conclusion that in evaluating whether we can accomplish this integrated system of hazardous and toxic waste management, that we are giving serious thought to withdrawing our request for delegation of the Federal hazardous waste program.

We envision within a few years, possible turnback of delegation at some water and air pollution control and pesticide enforcement responsibilities as well, unless adequate levels of funding are provided.

We work very closely with the other States and they, too, for us that they must consider returning Federal programs to EPA.

New York and the other Northeastern States have been very sensitive to the inequities which developed without a strong Federal presence in enviornmental management, both in air pollution and water pollution.

Federal standards and enforcement also prevent differences in policies and standards from giving some States economic advantages over others. The protect the Nation's industry from inefficiencies and administrative chaos of trying to meet requirements which vary from State to State.

In closing, I would say we have developed a fairly good partnership which has enabled New York State to go from a reactive management to one of effectively looking into the future and having a good balance and control over environmental degredation.

We believe that the existing cuts in the Federal EPA budget will make us lapse into reactive management where we will only be able to take care of the problems as they come up and not plan for them in the future.

It is difficult to believe, and I don't think that the reality that Congress wishes to reinstate so short-sighted economic competition for the basis of that resource use, undercutting what New York and other States as well as Federal planners have achieved basing environmental management on long-range needs in a consistent framework of national goals.

We would like to go on record urging you to adopt for 1983 funding for EPA at least equal to the 1982 level and make more support available for certain key programs, especially hazardous and toxic waste management.

Thank you, very much.

Senator PROXMIRE. Thank you, Mr. Flacke. We appreciate your testimony. I do have a question for you. Do I understand you correctly that New York will return its hazardous waste program to the Federal program if the 1983 budget is cutting through?

Mr. FLACK. That is correct. We have not concluded evaluating it, but we are looking for ways to transfer Federal funds from other programs to make up the shortfall and we are also revising our entire priority list.

If the final evaluation is, though, that we cannot operate the hazardous and toxic waste program, we will return interim authorization to the Federal Government and we will use the $3 million that the State is allocated in insuring that the Federal Government does the job that they say they are going to do.

We have not made that decision yet, and we are going to take a look at all alternatives because it is a grave step.

Senator PROXMIRE. I appreciate your telling us that, because other States have taken similar actions and then the Federal Government has to pay for it.

Mr. FLACK. I would say that it will cost much more for the Federal Government to do it than at the local level.

Senator PROXMIRE. Roughly how much——

Mr. FLACK. For New York State, it is the difference between $3 million and approximately $10 million.

Senator PROXMIRE. Why is that?

Mr. FLACK. Well, it was a growth program. We started out with 75-percent Federal aid, 25-percent local.

Last year we had begun to develop a progran that had a funding level of approximately $3 million. We were going to grow with that program to approximately $10 million over a 4- to 5-year period.

Instead of any growth, they are cutting the initial program back 16 percent. Those four areas—the old site problem, the generators, the transporters, and the disposal industry—we really just couldn't do the job. We couldn't run the manifest system; we really couldn't run the enforcement section; and we essentially couldn't even pay for the laboratory systems to take care of the old site problem in New York.

So, again, we are trying to shift funds from other Federal programs to one-construction grants, if possible. Various things that our region 2 administrator has advised us that we try. We have had a substantial increase from our State legislature over $1.5 million this year, but still in all, to effectively run the program that the Federal Government has asked us to run, requires at the end of this 5-year implementation stage of hazardous and toxic waste program approximately $10 million, not $3 million. It couldn't be done.

Senator PROXMIRE. Thank you.

[The statement follows:]

STATEMENT OF ROBERT FLACKE, NEW YORK STATE COMMISSIONER OF ENVIRONMENTAL CONSERVATION

Good afternoon, Mr. Chairman and members of the Subcommittee. I am Robert Flacke, Commissioner of Environmental Conservation for the State of New York. I am here to share with you New York's grave concerns about the Administration's budget proposals for the United States Environmental Protection Agency.

I want to begin by pointing out the importance to state environmental protection of maintaining funding for USEPA's own programs, and will further address this issue later in my testimony. However, the principal focus of my remarks today will be to outline the impacts on New York State, both for the short and long term, of the reductions which the Administration proposes to make in 1983 environmental program grants to states.

Since the leadership of the U.S. Environmental Protection Agency either doesn't understand the damaging effects of the Administration's budget proposals, or is not permitted by the Administration to inform the Congress of these impacts, it is incumbent upon State officials to spell out the consequences. This, I propose to do today.

If the Congress adopts these proposed cuts, the consequences to New York will be very serious. We would lose an estimated $2 million from our major grants, from the current year's base of $11 million.

An examination of the effects of the proposed budget upon our environmental programs shows that as early as 1984 there will be areas in which environmental protection is reduced below acceptable levels. Further, the efficiency which might theoretically be gained from some degree of federalism in environmental programs will not follow from the Administration's proposal. In fact, unless basic EPA funding is maintained at 1982 levels, and some programs previously cut are restored, environmental protection in New York will be significantly weakened and, paradoxically, the need for federal involvement in programs will grow, not lessen, as responsibilities for federal programs delegated to states are turned back to EPA.

1) Conventional pollutant control. Substantial progress has been made since 1970 in controlling "conventional pollutants' in air and water. Cuts in federal support for establishing and monitoring limits on air and water discharges, and for bringing enforcement actions against polluters, will unquestionably lead to increased discharges. We can lose the progress of the last decade: if controls are eased, it is only a matter of time before we see a return to the air pollution incidents and filthy waters that outraged the nation in the 1960's.

In New York, for instance, we anticipate loss of half our air pollution monitoring capability, severely damaging our "early warning" system to detect unhealthy air. Further, loss of nearly 50 percent of the federal funding which was planned at the beginning of this decade for the construction of sewage treatment facilities means that more than 100 plants which New York needs will never be built and 40 others will reach only low levels of treatment.

2) Toxic substance control. Limiting the release of toxic substances and hazardous materials into the air and water, and controlling their disposal on land is New York's top environmental priority, and should be the highest priority for the nation as a whole. Sound programs have been developed and an impressive beginning made in this complex task, but controlling toxic substances is even more expensive than controlling conventional pollutants, and demands greater federal support.

The Administration's proposed budget would significantly cut resources for toxics and hazardous waste control in New York State. Loss of needed federal support for air and water discharge control, pesticide enforcement and for the planned comprehensive program to prevent unsafe disposal of hazardous waste, will make it impossible for my department to prevent repeated incidents of environmental contamination with persistent materials which, now or later, have the ability to endanger the health and welfare of our people.

As examples of urgent toxics control needs which will go unmet, New York expects to lose half to three-quarters of our planned effort to establish limits for toxic air emissions. Further, we fear that in a year or two we will be forced to abandon our pioneering program to develop limits on toxic substances in water discharges, and to rely on EPA - which is already behind schedule in setting these standards and is also suffering deep budget cuts - for this critical program to prevent toxic contamination of our water resources. If the Congress wishes to control toxics in our environment, this funding must be restored.

3) State/federal partnership. A delicately-balanced partnership between the federal EPA and the states has characterized the nation's environmental programs under the Clean Air Act, the Clean Water Act, Federal Insecticide, Rodenticide and Fungicide Act, and now the Resource Conservation and Recovery Act. Under this arrangement, states accept delegation of wide-ranging environmental protection responsibilities created by federal statutes, and are granted federal program support. One very undesirable result of the Administration's budget proposals is likely to be refusal by states to accept or continue delegation of federal environmental programs. If this happens, we will see widespread confusion of responsibilities, duplication of effort, and inconsistencies between state and federal environmental agencies.

"Reverse delegation" would cause environmental management responsibilities to be concentrated in federal agencies, a result totally at variance with the principles of federalism. Since EPA's own program funding is also being cut, and since these state-federal environmental programs have developed as partnerships rather than exclusively-federal programs, it is fair to say that EPA will have neither sufficient resources nor appropriate organization to effectively replace the state programs that are lost. If EPA were to field federal environmental programs in New York comparable to those which the State has developed, the cost could be several times the expenditures for state program grants. Realistically such expenditures are not likely to be made. For many states, the President's 1983 budget could mean the end of environmental protection as we have known it.

My Department is now giving serious thought to withdrawing New York's request for delegation of the federal hazardous waste program, and envisions within a few years a possible turnback of delegation of some water and air pollution control and pesticide enforcement responsibilities as well, unless adequate levels of funding are provided.

I'd like to emphasize that New York has worked for several years to nurture our present cooperative relationship with USEPA. We have formally developed mutually agreeable environmental priorities to guide the state/federal program, and we also work together on a day-to-day basis to ensure that scarce resources, such as chemical analysis and regulatory enforcement capabilities, are efficiently used. Return of program delegation to EPA would kill this cooperative effort, confuse regulated industries, and cause wasteful duplication of effort between DEC and EPA.

4) Economic inequities. New York and other Northeastern states are highly sensitive to the inequities which develop without a strong federal presence in environmental management. Rivers and air currents do not recognize political boundaries. Pollutants discharged in one state often cause environmental or public health damage in another, and only

national standards can prevent one state's laxity from harming another. Federal standards and enforcement are also necessary to prevent differences in policies or standards from giving some states economic advantages over others, and to protect the nation's industry from the inefficiencies and administrative chaos of trying to meet requirements which vary from jurisdiction to jurisdiction.

New York has achieved a leading position among the states in environmental management. Our natural resources form the base not only for the quality of life which we value, but for sound and productive economic activity. We find it difficult to believe that the Congress wishes to reinstate shortsighted economic competition as the basis for national resource use policy, undercutting what New York and other states, as well as federal planners, have achieved in basing environmental management on long range needs and a consistent framework of national goals.

The President's proposal means a radical change in federal environmental policy without any change in environmental statutes, and a return of the grievous inequities which were the initial cause of demands by industry, the states, and the public for a federal role in environmental protection.

5) International relations. Not only does the Administration's EPA budget proposal have the potential to cause deep friction among states and regions of this country, but it also threatens to erode relations between the US and other countries. We in New York are acutely aware of the concern in Canada over certain types of transboundary pollution, such as sulfur in air causing acid rain over entire regions, or toxics reaching international waterways. Canada has become increasingly vocal in encouraging the US to maintain a strong environmental stance. Ignoring Canada's concerns is certain to create tension between the two countries, and threaten important cooperative undertakings such as sharing of hydro power and other resources.

Before closing, I would like to take a moment to underline a problem of exceptional concern to us. If the Administration's budget is adopted, New York State will be unable to carry out the Hazardous Waste Control Program it has developed to meet the mandates of federal RCRA. We planned this program in cooperation with EPA, and based upon assurances of 75 percent federal support. Withdrawal of funding for this program just at the time it is about to get underway is a very serious mistake.

During the four years since Love Canal was declared a public health hazard, New York has developed a regulatory program of unprecedented potential to clean up unsafe dumps from the past and to control hazardous waste from generation to safe disposal. Relying heavily upon federal Resource Conservation and Recovery Act funding, New York's program was scheduled to grow by 1987 to a level of more than $13 million annually. With projected deficiencies in federal support, we now anticipate, at most, a program of little more than half that level, with a corresponding loss in our ability to prevent contamination from unsafe handling and disposal of hazardous substances. And even this lower level of control cannot be achieved without enactment of new state fee authority.

A careful analysis of the future of this critical hazardous waste management program leads to the conclusion that, if the Administration's funding proposals stand, we will never achieve the preventive hazardous waste management which we envisioned. We will only be able to react to crises, not prevent them. Experience has taught us that this state of affairs is very dangerous.

New York spent four years and more than $60 million municipal, state and federal tax dollars to contain thousands of tons of toxic chemicals dumped 40 years ago in Love Canal. We estimate that proper disposal of these chemicals at the time they were generated would have cost a fraction of what taxpayers have spent on cleaning up Love Canal - perhaps $2 million in 1980 dollars. I cannot sufficiently emphasize that government has no right to mortgage the future by taking a hit-or-miss approach to hazardous waste control. Yet this is exactly what the President's budget would force.

In closing, I would like to stress that this Subcommittee needs to look beyond the immediate dollar savings in the Administration's 1983 budget proposal. The President's budget represents the first step toward a drastic change in the nation's environmental protection policy, certain to produce rapid decline in present levels of environmental protection. If the federal government means to abrogate responsibility to protect the nation's environment, this radical policy change should be made by the Congress under the searching scrutiny of the legislative process. Rhetoric about new federalism and doing more with less should not be permitted to obscure the destruction of the nation's environmental programs.

At this critical time in the history of environmental protection, New York wishes to go on record unequivocally in urging you to appropriate for 1983 funding for EPA at least equal to 1982 levels, and to make more support available for certain key programs such as hazardous and solid waste management. While even a $3.85 billion appropriation cannot be said to ensure complete environmental protection, it will maintain essential environmental programs through the current national economic crisis, and send to the state a clear message that the Congress intends to prevent degradation of the nation's environmental resources.

I thank you for the opportunity to testify before your subcommittee today.

SUPPLEMENTAL STATEMENT

PERSPECTIVES ON ENVIRONMENTAL PRIORITIES/FUNDING ISSUES

IN NEW YORK STATE

New York State, like most other Northeastern States, has a mature industrial economy with great concentrations of people and economic activity in aging urban areas. A century and a half of population and economic growth has exerted a significant impact upon the environmental resources of the State -- its air, water and land. Extensive regulatory and management programs have been developed during recent decades to restore and protect the quality of our environment.

New York's Leadership

New York has been in the forefront in carrying out effective federal and state programs to achieve desired environmental quality and public health objectives. In many instances our State has been in advance of national initiatives because of the early recognition of our environmental problems. For example, in 1965 the State approved a $1 billion Pure Waters Bond Act, seven years prior to the federal municipal sewage construction grants program under the 1972 Federal Water Pollution Control Act.

Historically, we have had strong air pollution and solid waste management programs. In recent years, New York State has preceded the federal government and most other states in recognizing other important environmental and public health concerns. In 1979 the State Legislature enacted a program for the investigation and remediation of chemical dump sites. This was prior to Congress's 1980 action on a federal "Superfund" program.

Need for a Federal Role

Severe economic and fiscal problems that became evident in the 1970's limit New York's ability to develop optimal environmental regulatory programs funded entirely from State revenues. We looked to the federal government to assume its national responsibilities for protection of the environment and funding of federal/state environmental programs. Industry, also, favored a federal regulatory program which would avoid the confusion and inefficiencies of state-by-state rules.

Congress in the early and mid-1970's did respond positively to this need, enacting strong national pollution control requirements and commensurate funding for EPA and the states to implement and enforce these national programs.

Erosion of the Federal Contribution

However, over the past few years, severe slippage has occurred in federal funding commitments and support of critical environmental programs. For example, funding to states for non-hazardous solid waste programs under RCRA Subtitle D has been totally eliminated, construction grants support for building sewage treatment plants has been cut in half, and many other important air and water pollution control programs have been pared far below their desired levels.

Further, inflation has substantially lessened the buying power of our existing EPA program grants, many which have received reduced or level funding over the past few years. Now, the current Administration has proposed substantial cuts, as high as 20% in state program grants, at a time when New York's environmental baseline efforts and key new program initiatives for toxics and hazardous waste management require greater resource commitments.

Environmental Priorities

Each year the New York State Department of Environmental Conservation and EPA identify joint federal/state environmental priorities through a formal process called the State/EPA Agreement. This agreement identifies commitments by EPA and the State on the allocation of federal grants and state match funds to achieve short and long-term program objectives. This year our priorities include:

- Regulating Toxic Air Emissions to Protect Public Health.
- Achieving National Air Quality Standards for Criteria Pollutants Under the Federal Clean Air Act.
- Protecting Surface and Groundwater from Toxics that Contaminate Public Water Supplies and Inhibit Other Uses of these Resources.
- Strengthening Control Over the Discharge of Industrial and Municipal Effluents.
- Implementing a Comprehensive Hazardous Waste Management Program for Regulating the Transport, Treatment and Disposal of Wastes.
- Cleaning up Chemical Dump Sites that Pose the Greatest Environmental and Public Health Concerns.

Effects of the Administration's Proposals

Critical Departmental program activities needed to achieve these priorities will be jeopardized by the proposed EPA program grant cuts.

Specific impacts will be detailed in the pages that follow. If these cuts take effect, however, the "bottom line" will be severely weakened environmental management capabilities and the prospect of increased environmental and health problems for the people of New York.

The state faces either loss of successful environmental programs, or assumption of severe economic inequities if New York attempts to maintain strong protection for its resources while other states follow a weakened federal approach. Either way, the State's citizens have a great deal to lose.

Economic circumstances in New York will preclude us from replacing "dollar for dollar" any prospective losses in federal grants. Even if the State's economic situation were healthier, a transition period of several years would be absolutely vital to seek and obtain the necessary state legislative/budgetary measures to offset the proposed EPA grant reductions.

Unless we maintain strong, coherent and consistent federal/state policies and programs for environmental protection, Government will default on past environmental progress and abrogate its responsibilities to address the new environmental challenges confronting us in the 1980's.

New York does not intend to go back in time. We will protect our quality of life even if federal assistance shrinks, but this protection will be costly, both to our citizens and our industry.

IMPACTS OF FEDERAL REDUCTIONS UPON ENVIRONMENTAL QUALITY PROGRAMS

1. Air

Air quality in New York State is good, largely as a result of a decade's intensive work bringing thousands of air pollution sources into compliance with the requirements of the federal Clean Air Act. Maintaining clean air is of the highest importance to New Yorkers, and is especially critical in New York City, where air pollution can quickly create an urgent health problem.

DEC's air pollution control program includes:

- monitoring of ambient air quality
- establishment of state air quality standards
- review and approval of permits for air pollution sources
- source inspection to ensure compliance with standards

Since 1980, federal support for this program has eroded each year. Projections for 1983 show air pollution control in New York funded to a level which, when adjusted for inflation, is lower than at any time since the program was intensified by Air Act amendments in 1977.

Reductions in federal support led first to elimination of less essential activities, then to more significant cuts in the meat of the state's program. Throughout the program, gradual cuts have slowed technical evaluations and threaten the thoroughness with which proposals for pollution control can be evaluated within statutory time limits for reviews.

The Administration's proposed 1983 budget, imposing a further 20 percent cut ($1.1 million) upon an already reduced program forces DEC to plan profound cuts in ambient air monitoring, diverting these resources to maintain the department's source permitting and inspection capability. At present, the state samples ambient air at approximately 250 sites statewide. If the 20 percent cut becomes reality, up to half these sites may have to be abandoned, significantly impairing the state's ability to detect pollution increases which could threaten compliance with the Clean Air Act. This drastic reduction in air monitoring capability is of special concern to communities in the New York metropolitan area. Elected officials in this area have requested that the state increase its monitoring intensity in locations where air quality may pose health concerns or where inability to comply with Clean Air Act standards could jeopardize federal funding or community economic development.

The 1983 air grant proposal has already caused DEC to begin rethinking whether the state can assume the federal PSD (Prevention of Significant Deterioration) program. Popular new federal air programs, such as the emissions banking and bubble programs, are out of New York's reach at proposed 1983 funding levels. If the pattern of reduced federal support continues, within two years DEC will find itself unable to continue delegation of other optional federal programs. The NESHAPS (National Emission Standards for Hazardous Air Pollutants) program, for instance, was assumed without additional federal funding. As resources for mandated programs shrink, such optional programs will have to be turned back to EPA. Not only will these failures in delegation strain EPA resources to operate federal programs in New York State, but they will also produce fragmented programs, partly run by the state and partly by EPA, with concommitant confusion and duplicated reviews.

Special 1980's program needs

New York State and EPA have agreed that certain areas of air pollution control deserve special concentration of resources and effort. New York's ability to remove its few remaining instances of noncompliance with Clean Air Act requirements is unquestionably threatened by the Administration's proposed program grant reductions. Two other major program priorities, controlling toxic air emissions and expediting environmentally-sound coal conversions, are also jeopardized by these program cuts.

The potential loss of NESHAPS review on state permits weakens New York's ability to maintain control of toxic pollutants in air emissions. Without additional federal funds, the state will be unable to maintain even its present low levels of activity in inventorying possible toxics sources: monitoring ambient air toxics levels, setting emissions limits for sources, and ensuring compliance with regulations. DEC toxics control planning envisioned an intensive effort to set air emissions limits for toxic materials, with the state developing an estimated 10 to 20 such limits each year. Funding reductions will make it impossible to carry out the sophisticated limit-development process for more than 4 or 5 individual substances each year. Without numerical limits for toxic materials, such emissions will either be undercontrolled (leading to possible harm to public health) or overregulated, (unnecessarily inhibiting economic activity).

Reducing federal support of New York's air pollution control program also places at risk the state's ability to insure that conversions of electric generating plants from coal to oil are carried out in the most environmentally sound and economically advantageous manner. Because oil supplies are costly and vulnerable to interruption, utilities seek speedy conversions to coal. DEC will be unable to fulfill its responsibility to thoroughly and quickly evaluate coal conversion applications unless federal support of the air program is maintained at least at 1982 levels.

2. Water

Clean water is essential to public health and to support recreation and economic development needs of New York and the nation.

New York has made great strides over the past 20 years in cleaning up the State's water resources, with stringent discharge controls in place and 838 municipal sewage treatment facilities built or underway. During the past five years, however, we have learned that protecting our waters from toxic contamination requires even tighter controls and more careful surveillance than preventing "conventional" pollution. Water pollution control programs need to become more comprehensive and sophisticated, not to be dismantled.

NYSDEC and EPA have agreed that joint State/Federal water pollution control efforts need most urgently to focus on:

- Comprehensive Toxics Control
- Stricter Control of Industrial Discharges
- Expansion and Improvement in Municipal Discharge Controls
- Groundwater Protection

Water Quality Permits

Because of past funding curtailments in Section 106 of the Clean Water Act, New York has already been forced to make compromises in regulatory responsibilities. At this time, all water discharge permits except those for municipal and major industrial discharges are being extended administratively without necessary inspection and monitoring. These unmonitored sources are relatively small, but their long-term cumulative effects may be significant.

Because remaining state water pollution control resources have been focused upon the most potentially damaging sources, each further cut will eat into core water pollution controls. As the number of permits that can be issued and enforced decreases, the risk rises that important sources will go uncontrolled.

Regulating Toxics

DEC is developing, in cooperation with USEPA and Canada, a toxic substances regulatory plan for international waters of the Niagara River. This three-year project will identify necessary controls for sources in the Niagara River, based upon comprehensive field investigations and review of available basin water quality data. The proposed cuts could even impact this priority effort. And with resources already strained, it is certain that this widely-applauded effort will not be extended to other New York water courses.

New York State has begun to issue "second round" N/SPDES permits to limit industrial toxic discharges. This effort makes extraordinary demands upon the Department's professional staff resources because it is being undertaken on a case-by-case basis, without comprehensive technological and health criteria to determine effluent limits. EPA is already late in promulgating these criteria and mandatory standards. It is critical that the agency's appropriation be sufficient to support expeditious development of needed national effluent limitations.

The fact that New York has begun the overwhelming task of developing permit limits for toxic substances underlines the critical importance of toxic discharge controls to protect the health of New

York's citizens. If the Section 106 grant cuts take effect, the State must seriously consider return of the delegated N/SPDES permit program to USEPA. Return of this program could mean the deferral of toxic effluent limitations in industrial discharge permits until EPA develops the needed federal effluent limits. Since EPA is also undergoing massive budget reductions, we foresee possible complete loss of an important regulatory mechanism for preventing the toxic contamination of water resources.

Since its inception, the national water pollution control program has mandated uniform treatment for each type of discharge, regardless of the quality of the receiving water. Federal policy now calls for more cost-effective controls, designed to take into account each stream's capacity to absorb discharges without damage. While this approach keeps costs down for dischargers, it increases the cost to government for evaluating each discharger's proposed system and tailoring permit limits to water quality needs. Program resources dedicated to setting permit limits are already inadequate. Reductions in Section 106 funding will make it impossible for DEC to develop meaningful and effective effluent limitations for hundreds of permits each year, and risk rendering the entire SPDES permit program ineffective.

Sewage Treatment Facility Construction

A major element in New York's success in achieving water quality goals has been construction of municipal sewage treatment facilities. Since 1965, New York has provided $1.65 billion in state monies to this critical water pollution control need. Since the federal construction grants program began in 1972 $3.5 billion in federal funds have supported sewage treatment plant construction in New York State. As a result of this vast public expenditure, along with the private sector's investment in water pollution control, many of the state's waters are in good condition, and clean water is once again becoming a valuable resource for New York.

However, despite the early start in building a statewide network of sewage treatment facilities, major discharges remain untreated. Based upon the criteria of the 1977 Clean Water Act, New York needs approximately $9.6 billion in additional construction, $4.3 billion to complete projects already underway and $5.3 billion to carry out needed projects not yet begun. The construction grants program as laid out in most recent Section 201 amendments fails to provide a realistic response to New York's needs to complete its water pollution control facilities. Over the life of the existing legislation, New York will receive no more than $1.3 billion. As a result, a minimum of 104 projects will not be built and at least 40 projects now underway will never include the high levels of treatment needed to fully protect lakes and rivers. The bulk of the remaining needs are for the New York City area, and it is in that area where the greatest water quality deficiencies will persist unless construction grants are increased.

Groundwater

A new program approach which New York has developed to bring surface water protection techniques to bear upon groundwater protection was scheduled to get underway during Federal Fiscal Year 1983. The strategy provides for a three-pronged approach to:

- strengthen the Department's capability to track down sources of groundwater contamination incidents;
- better organize and analyze available data to anticipate potential groundwater problems before they occur; and

- strengthen selected regulatory and enforcement efforts to prevent groundwater problems.

DEC is now re-evaluating its funding, to determine whether any remnant of this program can be initiated in the face of projected federal cuts.

3. Hazardous and Solid Waste Management

Preventing damage to the environment by hazardous industrial waste requires cleanup of old waste dumpsites and control of the transportation, storage, treatment and disposal of currently generated wastes.

New York's Program

New York State has, over the past five years, initiated major new hazardous waste regulatory management and enforcement efforts, building upon and going beyond the national mandates in subtitle C of RCRA. Our regulatory program focuses upon generator controls, regulation of shipping, and strict requirements for storage/treatment/disposal facilities.

In addition, special state-funded DEC units focus on hazardous waste enforcement, with investigative teams to uncover "mid-night dumping" for civil and criminal prosecution, and a compliance unit to ensure that responsible parties pay for dumpsite cleanup. The State is also devoting significant state resources to seek new capacity for improved treatment and disposal of wastes and to encourage the reduction and reuse of hazardous wastes.

All these State activities, however, are predicated upon a strong, cooperative federal/state program to control currently generated hazardous wastes from generation to disposal.

Effects of Federal Cutbacks

The Administration's proposed 16 percent cut in New York State's RCRA Subtitle "C" grant will sabotage our efforts to develop this comprehensive hazardous waste management program.

Underlying planning to build this complex hazardous waste management program was the assurance of EPA that, in 1983 sufficient federal funds would be available to provide 75 percent support for a program totalling $7 million. Adequate state funds have been allocated to provide New York's share of this program. This base would expand to a $13.5 million annual program by 1987. Instead, New York's underfunded 1982 RCRA grant was subject to a further cut of over $400,000 -- from about $2.3 million to $1.9 million. We expect that the Administration will in ensuing years push for further cutbacks of necessary federal funds.

Without adequate federal funding, New York cannot implement the originally planned program. We are now planning a long-term hazardous waste management program at 50 percent resource level, with many critical regulatory program elements eliminated, reduced in scope or deferred.

- New York's ten-year-old program to require that haulers of industrial waste obtain permits will be put on hold, with no new haulers permitted until additional funding is available. This means the loss of needed oversight and prior review of haulers.

- The State will subject only five major treatment/disposal facilities to the complex and detailed permitting process and development of long-term plans. Several hundred treatment, storage and disposal facilities, both on industrial plant sites and away from the plants where wastes are generated, need such evaluation and permitting. DEC planned to use statewide T/S/D facility permits not only to ensure safe operation, but also as a tool for encouraging high-technology neutralization or destruction of hazardous wastes and for limiting land burial of these wastes.

- State assistance to small hazardous waste generators will be deferred until more funds are available. Hazardous waste controls are especially burdensome and difficult for small generators to meet. Technical assistance from the state is often needed to help these firms reduce waste, cooperate with other generators in safe disposal and understand the requirements of the complex hazardous waste regulations.

Because of the impending cut in New York's RCRA grant, DEC must consider withdrawing the State's request for delegation of the federal hazardous waste program. Since EPA does not have sufficient resources, we do not expect them to adequately enforce the federal program in New York, if we do not proceed with delegation. As a result, we are already planning to use some of our scarce hazardous waste resources to insure that EPA carries out its responsibilities in New York State.

Other States are likely to be in the same situation, thereby placing even more responsibilities upon EPA. Ultimately if the Administration's budget policies are successful, only a "skeleton version" of Congress' intended federal/state comprehensive national hazardous waste management program will ever be implemented.

All the states will be losers in this situation. It will necessitate more costly "Superfund" cleanups and increase the prospects of severe and on-going public health and environmental problems emanating from our inability to achieve minimum preventive protection measures.

Solid Waste

Subtitle D of RCRA, which mandates a national program to control landfills where municipal wastes are disposed and to promote recycling and reuse of resources in solid waste, has been unfunded since 1981. Because of the lack of federal support, New York has terminated the open dump inventory to identify landfills contaminating resources, and virtually ended its resource conservation program (funds from a state bond issue to support recycling are still being awarded to a very limited number of projects). Failure to provide federal funds for this important area is shortsighted.

4. Pesticides Certification and Enforcement

New York's relatively small but important pesticides regulatory and enforcement program is an example of a program in which federal funding restoration is essential to protect key environmental resources and the public's welfare. An estimated 16 million pounds of toxic and often persistent herbicides, insecticides and rodenticides are used each year in New York State. Unless these very dangerous materials are applied correctly and handled with unfailing caution, they can readily contaminate drinking water supplies, fish and wildlife and other resources which humans consume and cause significant mortality among populations of non-target organisms.

The core of the State's pesticide program is field enforcement, monitoring the activities of some 32,000 certified applicators, attempting to restrain an estimated 9,000 illegal uncertified pesticide users, and preventing the illegal retail sale of exceptionally harmful pesticides. In addition, DEC each year administers examinations and issues credentials to approximately 3,000 candidates for pesticide applicator certification.

Effect of Federal Cuts

New York's 1982 pesticides grant from EPA was reduced by almost 40 percent from the 1980-81 maximum level which nearly met state criteria for a full pesticides certification and enforcement program. Carryover funds prevented this cut from having immediate full effect. The Administration's 1983 budget proposes a further reduction of nearly 20 percent, $40,000, from this already reduced grant. Both the 1982 and 1983 cuts will hit New York's pesticide control program in 1983, and the cummulative effect will be very severe.

DEC has already diverted staff from applicator certification to enforcement, reducing the frequency and choice of locations where examinations can be administered. Further reductions in availability of examinations will discourage applicators from seeking certification. Since a disproportionate share of unsafe pesticide use involves illegal and untrained applicators, the potential for environmental harm increases as certification capability is cut.

Even more critical to preventing environmental harm, however, is strong enforcement of pesticides use regulations and it is in this area where federal cuts will be felt most keenly. Even with reallocation of all available state resources from the certification program to replace lost federal support, if the President's budget is approved New York will be compelled to reduce its 29-member pesticide inspector force by six inspectors. This 20 percent reduction, along with a 50 percent cut in laboratory services, will place the state's pesticide monitoring effort on a reactive footing, making it impossible to carry out preventive spot checks and retail store inspections which serve as a deterrent to unsafe and illegal pesticide use.

In this context, we are especially concerned about the prospect of breakdown of control over pesticide use on Long Island. Long Island has both a uniquely vulnerable sole source drinking water aquifer and a proliferation of part-time pesticide applicators who attempt to escape training and certification. Erosion of enforcement measures which maintain at least some control over the activities of these applicators puts this irreplaceable drinking water resource, now used by an estimated 3 million people, at increased risk.

If further federal funding cuts beyond 1983 take effect, New York will be forced to return delegation of the FIFRA program to EPA. EPA cannot provide a program of scope and effectiveness comparable to New York's without approximately three times the expense.

SUBCOMMITTEE RECESS

Senator Proxmire. We are far ahead of schedule.

The witnesses who will be here are scheduled to appear at 4:20. It is now 4 o'clock, and they are both from Utah.

Senator Garn is chairman of the subcommittee and very anxious to be here for that. So we will return at 4:20.

[A brief recess was taken.]

STATEMENT OF ELROY LARIMORE, GENERAL MANAGER, GREEN RIVER VALLEY WATER DISTRICT, AND PRESIDENT, KENTUCKY RURAL WATER ASSOCIATION

Senator Garn [presiding]. The subcommittee will come to order.

Is Mr. Elroy Larimore here?

Mr. Larimore, we are happy to welcome you to the subcommittee and will be pleased to hear your testimony at this time. We will place your entire statement in the record following your oral remarks.

Mr. Larimore. I am here also reading part of the statement for David Bretzke, who was called away on an emergency in Utah.

Mr. Chairman, my name is Elroy Larimore, and I am general manager of the Green River Valley Water District. I also serve as president of the Kentucky Rural Water Association, and the director and executive committee member of the National Rural Water Association. Thank you very much for the opportunity to speak with you and the other members of the committee about an issue of great concern to small water systems throughout Kentucky and other States.

Over the past 3 years, we have been operating a grassroots training and technical assistance program for small water systems which was part of the EPA budget under their Safe Drinking Water Act program. We value this program and we seek your assistance in having it continue.

One of our chief concerns in Kentucky is for the provision of a safe and assured source of drinking water for the citizens.

We believe that this is essential for the physical and economic well-being of our State and the Nation. In 1974, the U.S. Congress passed the Safe Drinking Water Act which was designed to further this aim.

The enactment of the Safe Drinking Water Act brought on special problems for small community and rural water systems. On one hand they were faced with complying with a congressionally mandated and a law monitored by the Environmental Protection Agency. On the other hand, many small water systems lacked the financial resources and the trained operators needed in order to bring themselves into compliance with this law.

EPA estimated that approximately 80 percent of the 65,000 community water systems throughout the Nation served populations of under 2,500 persons. EPA also estimated that the great majority of violations of the Safe Drinking Water Act would come from these small systems.

We have certainly found this to be the case in Kentucky where the great majority of the community drinking water systems serve populations of under 5,000. It is in these systems where virtually all of our drinking water violations in fiscal year 1981 occurred.

A recent report by the GAO indicated that in fiscal year 1980, there were nearly 150,000 drinking water violations nationwide, again mostly in these small systems.

The dimensions of the small system compliance problem seem overwhelming, but instead of giving up or adopting a defensive attitude toward our State health department or the EPA, we have taken another approach. In 31 States, rural water people have banded together to operate rural water associations. Many members of these associations are members of the very systems who have the greatest safe drinking water compliance problems and who have initiated this unique approach in order to bring their systems up to Federal standards.

Each State association is overseen by a president and a board of directors made up of representatives from small systems throughout the State. These individuals donate their time to the association and hire and oversee a State association program manager and office secretary. The program manager, who must have a background in rural water, conducts at least 12 operator training workshops each year at diverse geographic locations around the State. At these workshops, water operators receive training and instruction in the basics of small water system operation, maintenance, and water quality testing. In addition, the program manager conducts followup, on-site technical assistance visits to water systems to assist water operators with specific problems

I believe that the success of this approach may be seen in the statistics compiled by the National Rural Water Association from January 1, 1981, through February 1982. During this period, some 361 rural water workshops were held by our State associations. A total of 12,120 rural water operators attended these workshops from 5,211 rural water systems. There were over 8,500 on-site technical assistance visits to improve water quality, of which 3,033 were made for helping meet specific Safe Drinking Water Act compliance requirements.

Our State association in Kentucky is one of the participants in the National Rural Water Association program. Of our 700 community systems, some 587 serve populations under 10,000. In addition, there are 661 noncommunity systems in the State. Over the past 3 years the Farmers Home Administration has provided over $70 million in loans and grants to these systems.

In order to promote Safe Drinking Water Act compliance and to help preserve the Federal investment in these systems, our association has conducted 16 workshops over the past 16 months and trained 343 operators. Our program manager has also made 354 technical assistance visits to rural water systems including 218 for compliance. And I know the State association in Utah is one of the participants in the National Water Association program.

From June 1, 1981, through March 1982, it conducted a total of 13 workshops attended by 240 water operators representing 99 systems. It also made a total of 153 on-site technical assistant visits throughout Utah.

Statistics, however, can never give the full picture of the degree of cooperation engendered by rural water associations among the rural water systems themselves and with State and Federal drinking water regulatory agencies. Indeed, it is by increasing small system awareness with the Safe Drinking Water Act and encouraging subsequent compliance that is perhaps the greatest achievement of this program.

This approach has avoided the traditional conflict between the regulators and the regulated and has replaced it with a cooperative effort within each State to work together to meet Federal law.

In addition, systems have been improved through more efficient use of material and equipment rather than the former practice of simply increasing capital expenditures to solve environmental problems. A particular point of pride for the National Rural Water Association has been the cost sharing which as been received from the private sector and the local and State governments. Currently, for every dollar of EPA grant funding awarded, some 25 cents in cost-sharing participation is provided.

The National Rural Water Association training and technical assistance program has been an innovative part of the U.S. Environmental Protection Agency's Office of Drinking Water program.

It has been cost-effective and has met priority congressional objectives. We have been informed that no funds have been requested for fiscal year 1983 for the program because EPA hopes that States will eventually pick up the program. This is not the case. I would respectfully urge the subcommittee to give its closest consideration toward restoring the funds for this important program that has played such a significant role in the effective implementation of the Safe Drinking Water Act.

Senator GARN. Thank you very much.

We appreciate your being with us and filling in for David Bretzke.

I understood he had a problem in Moab and couldn't be here. I would rather be in Moab than be here today. I would rather be any place in Utah than be here today, but being in Washington is part of what goes with the job.

We thank you very much for your participation.

Mr. LARIMORE. Thank you.

STATEMENT OF ROBERT B. HILBERT, GENERAL MANAGER, SALT LAKE COUNTY WATER CONSERVATION DISTRICT

ACCOMPANIED BY JAMES B. GROSS, DEPUTY EXECUTIVE DIRECTOR, GOVERNMENT AFFAIRS, WASHINGTON, D.C.

Senator GARN. I would like to call Robert B. Hilbert, general manager, Salt Lake County Water Conservation District, Salt Lake City, Utah.

Now that I have gotten the formalities over with, Bob, it is nice to have you here.

For the record, Bob and I have been associated for nearly 15 years. Back in 1967, when I became the "Great Gildersleeve" of Salt Lake City—a lot of younger people here probably don't have the faintest idea of who was the Great Gildersleeve. For those of you who are not old enough, he was on a radio show and was also the water commissioner of his community. During that same time, I became the water commissioner of Salt Lake City and worked very closely with Bob Hilbert.

Bob, it is a pleasure to have you before the subcommittee today.

Mr. HILBERT. Thank you, Mr. Chairman. I appreciate those comments.

Mr. Chairman, the American Water Works Association welcomes the opportunity to appear before you today to express our views concerning fiscal 1983 appropriations for the Environmental Protection Agency.

I am Robert B. Hilbert, the past president of the American Water Works Association, and currently manager of the Salt Lake County Water Conservation District.

With me today is Mr. James B. Groff, deputy executive director of government affairs, located here in Washington, D.C.

My remarks will attempt to address the concerns of both our association and the research foundation.

Senator, in recognizing your schedule, the complete comments of both organizations have been furnished to your staff and we would wish to have both of those comments and statements entered into the record.

Senator GARN. They will be included in the record in full.

Mr. HILBERT. The American Water Association is a 100-year-old, nonprofit, scientific, and educational society, and the largest organization of professional water supply people in the world. Its membership includes managers, engineers, operators, and other employees of both municipal and investor-owned, community-owned water systems, as well as more than 3,300 water utilities that provide approximately 75 percent of the Nation's drinking water.

QWWA Research Foundation was established in 1967 to provide leadership in and promotion of research in the water supply fields.

There are three basic needs for providing drinking water: One, we must determine what is in the water; two, we must determine what are the effects of the constituents found in terms of their impact on human health; and three, we must determine what must be done about those constituents that pose an unacceptable risk to human health.

EPA's previous approach appeared to be oriented toward instantaneous solution of all problems. This expenditure of talent resources in an attempt to solve many complex organic problems of questionable significance resulted in a diffusion of effort that provided very little progress toward solving the problems facing the drinking water industry today.

AWWA, therefore, applauds the EPA Administrator's determination to focus on real problems and strongly recommends that EPA use existing laws to control potential contamination of drinking water. It certainly makes more sense to remove contaminants at the point of discharge where they exist in high concentrations, rather than at the water plant intake where they are diluted to very low concentrations.

Concurrent with this effort to control contaminants before they enter water supply, an aggressive focus and coordinated research program must be mounted to determine the probable danger of such contaminants to human health. Where a risk to health is scientifically shown to exist, EPA should issue national standards uniformly applicable to all of the Nation's population.

Appropriations for EPA must provide funds to assist EPA and the States in mounting a strong, reliable monitoring program to find out what is in the water used for the drinking water supply.

Such a monitoring program will preclude reactions based on frequently erroneous assumptions as well as provide a reliable data base to intelligently address future problems and improve the quality of water delivered to the public.

We are convinced that it is not in the best interest of the public, who ultimately bears the cost, to install expensive treatment techniques to remove substances in drinking water merely because there is a presumption that they may harm human health.

We in the industry are not convinced that constituents that have to be measured in parts per billion and parts per trillion constitute a significant threat to public health. We deplore alarming the public when there is no scientific basis for concern.

On the other hand, we are as concerned as EPA about the potential health effects of these trace contaminants. Such words as "potentially," "likely to cause," and "suspected," are not enough to justify the expenditure of millions of dollars in this or any economy. Those concerns must be substantiated and the only way to accomplish that is through additional research.

I believe it well to point out at this time that our utility membership, of which Salt Lake City is a member, are contributing thousands of dollars toward a goal of $750,000 to support the efforts of the AWWA Research Foundation.

This is evidence of their concern and interest in further research.

The water industry applauded the following statement in July 1981, Senate Appropriation Committee Report, Mr. Chairman, I will quote:

> The committee emphasizes the patnership between the Government and industry that is implicit in the Safe Drinking Water Act and directs EPA to work more closely with the water industry for the improvement of water service throughout the country. In the research program, particularly, it is important that a portion of the Federal investment respond to municipal water industry priority and require substantial cost sharing, 25 percent or more, of the cost by water suppliers.

We continue to feel that a joint research with EPA is necessary and strongly suggest that this committee continue its effort to insure, perhaps by earmarking a portion of EPA's budget for industry purposes, cooperation between the industry and the regulatory agency in drinking water research.

In addition to research, EPA should become more involved in training and education demonstration grant programs. This will insure that water quality is improved at a point where it is most likely to have the most significant results.

AWWA applauds EPA emphasis on transferring drinking water programs to the States.

To do this, and to insure an efficient and effective transition of responsibilities to the States, AWWA agrees that sufficient funds be included in EPA's budget to allow State agencies to carry out their responsibility.

Federal financial support of national training and technical assistance programs must be continued and strengthened to provide quality administrative operational and research personnel for the industry.

Appropriations for EPA should recognize the need to continue to fund, or even increase funds for training programs at the State level to allow States to provide training in areas where there are needs, especially for the small water systems.

As the previous individual that was testifying, Senator, certainly the program of the Rural Water Association throughout the country, and more particularly in the State of Utah, where it was organized just a year ago, it is a good and growing program and its direct efforts to the small utility—and in the State of Utah 96 percent of the population is served by those communities of 5,000 people or less. There is certainly a need there and we support your attention to the Rural Water Association needs, also, Senator.

We share EPA's concerns for public health as evidenced by our support for the Safe Drinking Water Act, our assistance in developing of interim drinking water regulations, our encouragement to the States to assume prima facie, and our program of nationwide workships to develop public awareness in the total effort.

Mr. Chairman, we appreciate the opportunity to present these few facts to you and, with our two statements that you have entered into the record, this should present the AWWA's position on the EPA position.

Senator GARN. Thank you very much, Bob. I appreciate your testimony. And may I say how much I agree with it. We have received a lot of testimony before this subcommittee this year on EPA's budget; most of it, from many of my colleagues, has been very critical on the assumption that the reduction of money is the reduction in areas such as water and air quality. I recognize that as a measuring stick with too many people, that they relate the level of funding to the outcome of the program, which I have not found to always be true; in fact, amazingly not true. The Administrator of EPA, Ann Gorsuch, testified before our subcommittee and had very difficult hearings, particularly in the House. In every case where there were recommended reductions, it was interpreted into Mrs. Gorsuch trying to have dirty air, dirty water, and so on. She has tried to explain and I have tried to back her up, that sometimes there are programs that are not very effective, no matter how much money you spend on them. In fact, a reduction of dollars to concentrate on those that are effective is not a lessening of commitment to clean water and clean air.

From my personal experience, the water utilities of this country are not in favor of dirty water; they never have been and they never will be. But we always had to deal with a bunch of programs that sometimes required more work and more effort to comply with and they were more of a paperwork project than a clean water project. You certainly know what I am talking about. We fought some of those battles together.

I appreciate your saying that money doesn't necessarily solve the problems. There are some programs that should be increased because they are effective, and there are others that are not and should be reduced, or eliminated. In my opinion, this is what this administration is attempting to do and certainly is not in favor of dirty water or dirty air.

I know back in the days when I was involved at the local level water, I was always getting in trouble, as you well know, for the ordinances we had on the watershed, specifically when we insisted that little slip trenches were not enough for the backpackers that went down to the cottonwood streams and caused problems for both of our water supplies.

I would also agree with your emphasis on not only returning more authority back to the local level, but with that providing the means for training and technical assistance at the local level, so that in the area of some of the rural systems, where they do need help, that we provide assistance without simply dictating solutions from Washington and give them the technical assistance and training so they can implement those programs at local levels.

Mr. HILBERT. I appreciate those comments, Senator. Certainly if the research is conducted at the Federal level and the technology is developed that professional State level can implement the technology instead of uniform application throughout the country. The water supply of Salt Lake City is different from that of Washington, D.C., and the professionals know that and know how to apply that technology once the research is developed. Throwing money into bad programs certainly does not derive clean water.

Senator GARN. It doesn't, and you made a very good point.

The water supplies are quite different. I get a kick out of reading some of the articles back here about water supplies here and in Virginia. They do not have any knowledge whatsoever what it is like to live in a dry arid State. We have had more rain here in the last 3 days than we get in Utah in June, July, and August. In fact, they have not figured out how to catch and store it for the periods of time it doesn't rain quite as much. There are definitely geographic situations that are different in parts of the country. And it bothers me again that somebody thinks that one agency in Washington is capable of coming up with uniform solutions for a whole country. You have lived with the water conservation district, primarily supplying water for Salt Lake County, all of these years, and you know and understand it on the daily basis. And then you get some brand new person 2 years out of college in EPA who is going to come out and tell you how to manage your water supply.

Mr. HILBERT. It is frustrating at times.

Senator GARN. That is one of the reasons I am as bald as I am. I used to tear my hair out when I got some EPA regional man telling me how to supply water to various areas, when he didn't have any experience. They were also very good in telling us what to do uniformly in other areas, like the transportation control strategy, that you may remember which didn't fit Salt Lake City and Salt Lake County, because they were measuring the pollutants on the off ramp from the freeway and interpolating that information for the whole county.

I do appreciate your testimony.

[The statement follows:]

STATEMENT OF THEODORE C. POPE, JR., MANAGER, WATER OPERATIONS, ORLANDO (FLA.) UTILITY COMMISSION, AND CHAIRMAN, BOARD OF TRUSTEES, AWWA RESEARCH FOUNDATION

In behalf of the AWWA Research Foundation and its national membership I appreciate the opportunity to officially deliver this statement to the Subcommittee for consideration as the EPA appropriation is being reviewed. Besides being the Manager of Water Utilities in Orlando I am the Chairman of the AWWA Research Foundation which represents the collective research interest of approximately 4000 water supply utilities and other organizations throughout the United States. In that respect I address the Subcommittee not only from the perspective of one of the people on the firing-line but also as spokesman for the industry which provides drinking water to the great majority of Americans.

As the Subcommittee considers the appropriation of funds to the Environmental Protection Agency, there is but one aspect of the Agency's budget that we wish to address: drinking water research and development. The Administration proposes a decrease of almost five and a half million dollars in the 1983 fiscal year budget as compared to the 1982 appropriation. That's a 19 percent reduction in a line item that by all rights cries out for an increase. However, my plea is not about a matter of five million dollars; it is rather a matter of perspective on the state of the nation's drinking water and the needs of tens of thousands of municipal water utilities and the best interests of American consumers. I am concerned about the Administration's understanding of the role of the federal government in protecting the public health and safety and its grasp of the present situation in the drinking water industry.

I would first like to put this research budget into some type of perspective. The approximately $23 million requested represents a federal government investment of about $0.10 per year for each person in the U.S. The government water supply research expenditures in the Netherlands and Switzerland amount to, respectively, $0.15 and $0.19 per capita. If this were translated to the U.S. it would mean an equivalent funding effort of between $35 and $45 million. This is a considerable increase over the administration's budget request but even it doesn't tell the whole story. Both of these comparatively small countries do not have the water quality variations and complexities that we experience in this vast land. For instance, Switzerland's source of supply, for the most part, is the pristine and abundant snow-melt from the Alps. In the Netherlands, there is a companion research effort mounted by the water industry that is four times larger than the government's effort; thus, the government's research can be concentrated in a few specific areas. When these factors are taken into consideration, a U.S. federal research effort of $100 million does not seem unreasonable or out of proportion to our European counterparts.

The federal government, primarily EPA, and the water supply industry share in the responsibility for providing a safe and wholesome water to the citizens of the U.S. Each party has a critical role to fill and if properly managed, a firm partnership will benefit all. The water utilities' role is to produce and deliver a water which does not jeopardize the public health. The federal government role is to investigate the health implications of the contaminants that we are constantly detecting in our drinking water. Without this basic information no one, neither the water suppliers nor EPA, can justify additional expenditures to further purify our drinking water.

We in the industry are not convinced that contaminants that have to be measured in parts per billion and parts per trillion constitute a significant threat to public health. We deplore alarming the public when there is no scientific basis for concern. On the other hand, we are more concerned than EPA about the potential health effects of these trace contaminants. However, words such as "potential" and "likely to cause" and "suspected" are not enough to justify the expenditure of millions of dollars in this or any economy. Those concerns must be substantiated and the only way to do that is through research.

We are concerned about the decrease in health effects research because it means that we are not expanding our base of knowledge, and our need for more data is beyond question. Also, we are concerned that this reduction will not affect the regulatory process at EPA but that it will proceed at its previous pace without the benefit of substantiating research. A specific case in point was the Agency's attempt to require granular activated carbon treatment for all "vulnerable" water systems in the U.S. This proposed regulation had no basis in fact, was badly written, and was accompanied by cries of "carcinogenic substances" and "insurance policy". These phrases and slogans were used to justify the proposed regulation instead of scientific evidence.

In short, we are concerned that regulation development will proceed without the substantiating research needed to confirm the Agency's concerns. We feel that we are justified in our fear of regulations based upon dubious data because of the past and present actions at EPA. For instance, three of the five top priority items in the Office of Drinking Water's budget plan for FY83 relate to "revised drinking water standards", "standards for unregulated contaminants", and "health advisory activities". A logical question is: On what basis will these new and revised standards be set?

Specifically, we recommend that an additional $5,000,000 be added to the research budget and that it be earmarked for basic health effects research. The proposed increase would raise the research level back to the FY82 appropriation and would provide the necessary minimum of continuing support to those activities that are the basis for all of the water supply efforts in the U.S. We in the water industry stand ready to support and resolve any substantiated problem with our water, but we also stand ready to oppose any unjustified attack on the capabilities of municipal utilities or the quality of their product.

The water industry has no expertise in health effects research -- in animal testing and epidemiological studies. If the federal government reduces its effort in this area, there is no one to fill the gap. If EPA's laboratory facilities and scientific staff are reduced, the loss of continuity and expertise will be severe, for it cannot be easily recovered in some future year. We strongly urge the Subcommittee not to let this happen. EPA's health effects effort has not been able to keep pace with the developments of recent years; to cut it now, while the dimensions of the problem are expanding, is shortsighted and potentially dangerous.

The issues associated with drinking water contamination cannot be put in a fiscal deep-freeze while we struggle with the national economy. Tomorrow's price tag will be much higher than today's -- in terms of dollars and public health. The water industry's concern about health effects research does not arise from any narrow self-interest; it is rather a genuine concern for the public welfare and the social and economic cost of curtailing this essential federal activity.

In addition to the relatively new problem of organic chemical contamination, many communities still struggle with microbiological contamination, both in their water sources and in their distribution systems. Certain strains of bacteria -- Giardia lamblia, for example -- escape the disinfection methods employed in conventional water treatment. The monitoring requirements of the Safe Drinking Water Act have revealed that a significant number of small communities exceed the Maximum Contaminants Level for coliform bacteria. Many small water systems are simply not equipped to achieve the existing drinking water standards for organic and inorganic contaminants. The prospect of future regulations that embrace a variety of organic compounds raises serious if not impossible problems for thousands of small comunities. We do not have treatment technologies that are within the economic capacity of those water systems. That is another important challenge for research and study -- not only cost-effective technologies but also legal, financial and institutional solutions.

Larger water systems are also beset by major and complex problems. Deteriorating distribution systems are a fact in a number of older cities and local officials are understandably staggered at the thought of having to dig up and replace many miles of mains and pipes. In many areas of the country, drought threatens water quality as well as quantity. And all the while, operational costs continue to spiral.

In all these matters, research holds the key to feasible solutions. Without an appropriate level of research, there will be no solutions, no progress. The water utilities of this country are truly expert in the conventional treatment modes that gave us the reputation of having the best and safest drinking water in the world. However, the problems and challenges that have emerged during the last decade or so, and the general advances in science and technology, are creating gaps between what we know about the contaminants in drinking water and the significance of those contaminants. Only a vigorous research program can help us keep up and move ahead to an adequate level of response to the range of issues confronting us.

The water industry applauded the following statement in the July, 1981, Senate Appropriations Committee report.

> "The Committee emphasizes the partnership between government and industry that is implicit in the Safe Drinking Water Act and directs EPA to work more closely with the water industry toward the improvement of water service throughout the country. In the research program in particular, it is important that a portion of the Federal investment respond to municipal water industry priorities and require substantial cost-sharing (e.g., 25% or more of the cost) by water suppliers. The Committee's intent here is to stimulate the growth of a nationally coordinated industry research effort and to recognize that water service, although it includes compliance with regulatory requirements, embraces a wide range of issues and practical problems, the solutions to which merit public interest and support. The data and technologies developed should be systematically disseminated through the best means available including the use of industry channels so that many communities may share the benefits of the research effort."

The water industry was eager to respond to this challenge and saw your directive as the first step in forming a solid research partnership with EPA. In fact, for the first time the industry contributed funds to the AWWA Research Foundation for the purpose of expanding the industry's own research program and cooperating with EPA in joint efforts. Unfortunately, no one at EPA read the directive or if they did, they didn't take it seriously.

Our numerous attempts to secure a joint research effort with EPA in which we proposed substantial cost sharing by the industry, and in one instance proposed a comprehensive technology transfer system as mentioned by this Subcommittee, have been rebuffed with the simple statement that the proposal doesn't fit into the Agency's priorities. The Subcommittee's directive was ignored even when it was explicitly and repeatedly brought to the Agency's attention. It is quite obvious that "municipal water industry priorities" are not going to be researched unless they just happen to coincide with the regulatory agency's priorities. Therefore, we request that the Subcommittee repeat its directive, perhaps in more specific and stronger language, or consider "earmarking" a portion of the EPA budget for industry priorities. A $2 million earmark would only represent 8.7 percent of the existing EPA budget request and would allow us at the Research Foundation to provide a greater than 30 percent matching funding level for joint projects.

To restate the three principal points:

- o Health effects research is a large and critical need which is a responsibility of the federal government; the appropriation for this purpose should, we believe, maintain or increase the funding level of previous years.

- o The water industry is confronted by a multiplicity of problems with both health and economic implications; here, too, research is a necessary and wise investment.

- o EPA has failed to respond to the subtle directive to research water industry priorities and we request the directive be repeated or that $2 million be earmarked for this purpose.

As the Subcommittee formulates its bill for presentation to the Senate, we ask you to give proper weight to the need of maintaining a strong program of drinking water research. No community water utility in the country is beyond the need of improvement. And there can be no improvements without research.

STATEMENT OF AMERICAN WATER WORKS ASSOCIATION

The American Water Works Association appreciates the opportunity to present its views concerning fiscal year 1983 appropriations for the Environmental Protection Agency.

The American Water Works Association (AWWA) is a 100-year old non-profit, scientific and educational society, and the largest organization of professional water supply people in the world. Its over 33,000 members include managers, engineers, operators and other employees of community water supply systems, as well as scientists, academicians, state representatives and others, who all hold a genuine interest in water supply and the public health.

Since it was founded in 1881, the Association has been dedicated to promoting the public health, safety and welfare through improving the quality and quantity of water delivered to the public. AWWA's membership currently includes more than 3,300 water utilities, which provide approximately 70% of this nation's drinking water and hold as a common concern the provision of the best possible water to consumers at a reasonable rate.

The Safe Drinking Water Act was passed in 1974. Unfortunately, since the Act's passage, it appears that all of us involved with potable water have been somewhat engaged in an exercise of identification and overreaction to micro-organics to the point where the basic intent of the law seems to have been obscured. Now science and technology are identifying literally thousands of alleged pollutants. However, the scientific community has little grasp of how these chemicals affect human health. The result is that in the seven years since enactment of the Safe Drinking Water Act, the basic needs to assure safe drinking water, specifically research, education, and training, have not been adequately addressed.

Our comments are made with the intent of achieving real and measurable progress towards improving the quality of water for human consumption.

There are three basic needs for providing safe drinking water. They are to determine: (l) what is in the water; (2) what are the effects of the constituents found in terms of impact on human health; and (3) what must be done about those constituents that pose an unacceptable risk to human health.

Previously, EPA's approach appeared to be oriented toward instantaneous solution of all problems. This expenditure of talent and resources in an attempt to solve many complex organic problems of questionable significance resulted in a diffusion of effort that provided very little progress toward solving the problems facing the water industry today. AWWA applauds the EPA Administrator's determination to focus on the real problems and strongly recommends that EPA use existing laws to control potential contamination of drinking water. It simply makes more sense to remove contaminants at the point of discharge where they exist in high concentrations rather than at the water plant intake where they are diluted to very low concentrations. As EPA exercises its authority to prohibit discharge of contaminants into the nation's water sources, the need to remove them will obviously diminish. Concurrent with this effort to control contaminants before they enter the water supply chain, an aggressive, focused and coordinated research program should be mounted to determine the probable danger of such contaminants to human health. Where a risk to health has been scientifically shown to exist, EPA should issue national standards which should be uniformly applicable to all of the nation's population. There is no justification for discrimination by establishing different MCLs based on a system's size, financial resources or other criteria.

The Act and its implementation must recognize that professionals are involved in water supply. They should have the authority and the flexibility to exercise their judgment in establishing treatment techniques advising the public, managing resources, etc. AWWA is convinced that it is not in the best interest of the public who ultimately bears the cost to install expensive treatment techniques to remove substances in drinking water merely because there is presumption that they may harm human health.

As pointed out, there are three basic responsibilities related to drinking water, i.e., (1) determine what is in the water; (2) identify the health effects of the constituents found; and (3) decide what must be done about those constituents found which may harm human health.

Appropriations for EPA must both recognize these needs and provide funds to assist EPA and the states in mounting a strong reliable monitoring program to find out what is in the water. This will preclude reactions based on frequently erroneous assumptions as well as provide a reliable data base to intelligently address future problems and improve the quality of water delivered to the public.

AWWA agrees with EPA that "in any successful regulatory program, the heaviest expenditures should come first" — in developing the needed research, regulations, guidelines and expertise. Basic and thorough research is basic to successful implementation of the Safe Drinking Water Act.

Due to the complexity and cost of health effects research, the federal government is the only one that can accomplish the necessary in-depth analysis required to determine the probable risk of exposure of the human body to these contamiants.

The third responsibility, that of determining what must be done about contaminants is one that is best carried out by industry and state health officials since they are in the best position to consider differences in raw water quality. The free enterprise system has, in the past, provided technologies resulting in a number of successful treatment techniques. These technologies are available to primacy authorities which, in conjunction with individual utilities, should be free to determine the best technique for a given problem in their system.

AWWA believes that EPA must adjust its regulatory role by moving required responsibilities to primacy authorities and increasing guidance functions. Performance standards, not mandatory treatment techniques, must be the goal of the federal regulatory agency. In addition to research, EPA should become more involved in training and education demonstration programs. This will be insure that water quality is improved at the point where it is most likely to have the more significant results.

The American Water Works Association agrees with the Administration's position of rededicating resources away from government for the sake of government and toward environmental results. This will reduce the amount of federal involvement while increasing the states' role, particularly in drinking water program. AWWA applauds EPA's emphasis on transferring drinking water programs to the states. The states should retain and actively implement their primary responsibility for control of the quality of both surface and groundwaters within the context of federal requirements, programs and policies.

To do this, and to insure an efficient and effective transition of responsibilities to the states, AWWA urges that sufficient funds be included in EPA's budget to allow state agencies to carry out their responsibilities. States must be staffed with sufficient multidisciplinary personnel of high competence to fulfill the goal of providing monitoring and enforcement for safe drinking water. The Association is pleased to note that continuing operational grant programs show only a 5% decrease from 1979 levels, which were the highest for total state grant funds. In fact, if certain Clean Water Act grants to states are included, EPA's fiscal 1983 funding for state grants is actually 53% higher than in 1979 — a position that AWWA sees as necessary before states will themselves implement necessary regulatory stratagies.

Federal financial support of national training and technical assistance programs must be continued and strengthened to provide quality administrative, operational and research personnel for the water industry. One of our major concerns today is the need for training of the small water utility operator who is often responsible for systems supplying less than 500 customers. With the large number of small systems in this country, there is a definite need for upgrading their capability to carry out their responsibilities.

The American Water Works Association has formed a committee to work on the specific problems of smaller water utilities. The committee has found, in working with the states, a strong indication that there is a lack of training of operators of smaller utilities. It is essential to the public health that these individuals receive training to provide them a greater knowledge of the water system they operate. It is also important to note that these people may be mobile park operators, developers or others who have no basic knowledge of the water works field or of proper disinfection of mains and water systems.

AWWA urges that EPA continue to fund and increase funds for training programs at the state level to allow states to provide training in areas where there are strong needs.

As we noted earlier, AWWA is an association of professional water supply people. The record clearly shows that AWWA has not continually opposed the federal bureaucracy or specifically EPA. In fact, AWWA shares EPA's concern for public health as evidenced by our support for the Safe Drinking Water Act, our assistance in development of Interim Primary Drinking Water Regulations, our encouragement to the states to assume primacy, and our program of nationwide workshops to develop public awareness of the total effort. AWWA sincerely believes, however, that the above, in conjunction with the industry and EPA working together, will result in better, safer water at a price that is consistent with the benefits derived.

AWWA appreciates the opportunity to present this statement and will be pleased to assist the committee in its deliberations at any time.

STATEMENT OF DEBORAH HORTON, DIRECTOR OF ENVIRONMENTAL TECHNOLOGY, UTAH TECHNICAL COLLEGE, PROVO, UTAH

ACCOMPANIED BY:
- **LARRY SILVERMAN, EXECUTIVE DIRECTOR**
- **RICHARD GLAZER, REPRESENTING THE PROFESSIONAL COMMUNITY CONCERNED WITH ENVIRONMENTAL WORK FORCE TRAINING**
- **STEPHEN E. MOEHLMANN, PROJECT MANAGER**
- **ANDREW HOLTON**

Senator GARN. Deborah Horton, please come forward.

Ms. HORTON. This is Larry Silverman and he will be making the introductions.

Mr. SILVERMAN. Thank you, Senator.

My name is Larry Silverman. I am executive director of the American Clean Water Association. We are a Washington-based group with members across the country.

I just want to introduce the panel we have here.

Miss Horton will speak and Mr. Glazer will supplement her comments. I also want to make one brief comment on this committee's role in the area of operator training and technical assistance, because that is the topic of the day of this group.

First, let me say that real experts of operating training are at this table. We must have about 45 years in experience in training waste water treatment operators and water system operators. These are the people who are really doing the job.

Debbie Horton is the director of the Utah training center which is located at Utah Technical College in Provo, Utah.

The center has an excellent track record in training treatment plant operators.

Miss Horton is an active member of the National Environmental Training Association, a membership organization promoting development of a qualified environmental work force.

We have also with us Mr. Steven Moehlmann, who is the president of the transportation unit, to answer questions. Mr. Moehlmann is also project manager for the Association of Boards Certification for operating personnel. This is the association of the State agencies which certify to the competence of the operating personnel in water and waste water treatment plants.

This is the only measurement we have of the people who handle our water and waste management to know what they are about.

Andrew Holton is here, an officer of NETA, and is training manager for the Maryland State Department of Health and Mental Hygiene.

And, finally, Richard Glazer, director of water quality program at Ulster Community College. He has had extensive experience in the field of training and has written training materials and developed curricula used by several training programs. He is a former municipal official and I understand he is running for the State Senate.

We submitted our testimony for the record. My only comment as a Washington observer is to say that were it not for this committee and its corresponding committee in the House, there would be no federally supported training program.

I think it is appropriate that this committee should pay some attention to these small dollar item programs because it is a key to fiscal management for much larger programs.

In the last 10 years, the Federal Government spent $25 million on waste water treatment facility. Although we have achieved a great success in many areas, they are troubled facilities, many of them, and part of the reason is that the work force has not trained, or is not able to do that, and it has consistently been EPA policy or OMB's policy to negate the training fund. Not just this administration, but the last one and the one before and the one before that. And I thank this committee's concern for getting the most out of those big dollars that has been in the training program and I think that has been a very wise investment.

[The statement follows:]

STATEMENT OF LARRY SILVERMAN, EXECUTIVE DIRECTOR, AMERICAN CLEAN WATER ASSOCIATION

Mr. Chairman, my name is Larry Silverman and I am the Executive Director of the American Clean Water Association (ACWA). I am pleased to testify today on behalf of our organization on the need for the Environmental Protection Agency to continue and enhance its commitment to the training of wastewater treatment plant operators.

I would like to take this opportunity to introduce the other members of the panel. They are professionals in the field of environmental training and have dedicated the better part of their lives to helping produce a competent environmental workforce capable of managing and operating wastewater treatment systems which produce clean water in a cost-effective manner. They will speak form their experiences on the typical problems faced by treatment facilities and suggest how training can help the operators overcome some of these difficulties.

Debbie Horton is the Executive Director of the Utah 109-b training center which is located at the Utah Technical College in Provo, Utah. The center, under Ms. Horton's leadership, has an excellent track record in training treatment plant operators. Ms. Horton is an active member of the National Environmental Training Association, a membership organization promoting the development of a qualified environmental workforce.

Richard Glaser is currently the Director of the Water Quality Program at Ulster Community College in Ulster, New York. He has had extensive experience in the field of training and has written training materials and developed curricula used by several training programs.

The American Clean Water Association is a membership organization composed of individuals in the water and waste management field. Our members come from a variety of professions and disciplines representing business, government, academia, and private, non-profit institutions. ACWA is dedicated to promoting clean water at an affordable cost and we have consistently supported policies and legislation which will reduce water pollution in a cost-effective manner.

Last year, thanks largely to the work of the House and Senate Appropritions Committees, Congress appropriated $2.625 million for the Environmental Protection Agency to implement training programs for sewage treatment plant operators in Fiscal Year 1982. However, the Administration failed to request funds for this purpose in Fiscal Year 1983. We are here to make the case for Congress to include funding for training in the FY 1983 budget.

THE PROBLEM - Continuing Non-Compliance of Municipal Treatment Plants

Today in 1982, ten years after the original enactment of the Clean Water Act and after the expenditure of more than $30 billion on the construction of wastewater treatment facilities, many municipal plants are still unable to produce environmentally safe effluent. Plants all over the country are consistently violating the standards for both conventional and toxic pollutants. The often quoted General Accounting Office report, "Costly Wastewater Treatment Plants Fail to Perform as Expected," indicated that out of a sample of 242 plants in EPA Regions I,V, and IX taken in 1978 and 1979, 87 percent had at least one violation of their discharge permits. 56 percent were in violation for more than half the year, while 31 percent were considered to be in serious violation, meaning they were in non-compliance for four or more consecutive months and exceeded one or more discharge limits by at least 50 percent. EPA statistical reports on plant performance, the GAO study points out, suggest that, at any given time, between 50 and 75 percent of all plants are in violation of their National Pollutant Discharge Elimination System (NPDES) permits. The result of this abysmal performance is deterioration of water quality, reduced fishing, swimming, and other water-related recreation and business opportunities, and increased risk to public health.

Why Are So Many Plants Out of Compliance?

There are a number of reasons for the failure of a sewage treatment plant to meet its permit requirements. They include: (1) inadequate design of the system; (2) problems due to excessive infiltration and inflow of water into the system; (3) problems handling certain industrial wastes; and (4) inadequate operation and maintenance of the facility.

While ACWA has consistently supported measures which would provide accountability for design and construction as well as an effective pretreatment program which would help alleviate some of the operational problems caused by industrial wastes, today we would like to focus on the operation and maintenance problems of treatment plants since they are most likely to be remedied by increased training of plant operators. Several factors can lead to inadequate operation and maintenance of treatment systems. Among them are: (1) an insufficient operation and maintenance budget often times resulting from poor planning or an inadequate user charge scheme; (2) insufficient attention to preventive maintenance; (3) underqualified staff; and (4) lack of operator training.

Training of treatment plant operators will not solve all of these problems nor will it bring every violating plant into compliance. However, at the same time, training will help some plants meet the standards, it will improve water quality in general, and it will lead to more efficient operation of plants. All plants do not suffer from inadequate training, but it is fair to suggest that inadequately trained staffs are present more often than not in plants which are consistently unable to meet their effluent standards. In fact, the GAO specifically cited undertrained personnel as a major reason for the failure of many treatment facilities to operate properly.

Training is Not a Simple Task

Operating, maintaining, and managing a wastewater treatment system is not a simple job. Machinery, equipment, and treatment processes have all become increasingly more sophisticated. Consequently, training involves more than simply telling the operator which lever to pull and which dial to turn. Quality training provides instruction on comprehensive management of the overall treatment system and it helps plant personnel gain a better understanding of how the integral components of the system work together. Good training addresses a number of issues ranging from how to select and implement the proper user charge scheme, to promoting water and energy conservation, to employing preventive maintenance, to applying the treatment chemicals at the correct time.

Just as the operation of treatment plants has grown in sophistication, the training profession has become more sophisticated in its efforts to meet the needs of the operators. Good training materials have been produced on technical operation of plants as well as on financial management of the system. In addition, a number of organizations have developed quality technical assistance and training programs. Examples of such groups are the National Demonstration Water Project, the New Jersey Association of Environmental Commissioners, Virginia Water Project, Maryland Rural Development Corporation, the National Environmental Training Association, the Association of Boards of Certification for Operation Personnel in Water and Wastewater Utilities, the National Association of Sewer Service Companies, the organizations within the Rural Community Assistance Program network, Operating Engineers, Clean Water Fund and others. These groups have all demonstrated the capability to help plant managers and operators do a better job of cleaning up the water in their systems.

Training Makes Economic Sense

Not only does training of wastewater treatment plant operators make environmental sense, but it makes economic sense as well. As I mentioned previously, ACWA has consistently supported the most cost-effective approaches for water and waste management, and our support for training is in line with that tradition. EPA Deputy Administrator, Dr. John Hernandez, has acknowledged the need for training on several occasions. In fact, he stated to this subcommittee last February that it is cost-effective to invest money in the training of sewage treatment plant operators.

Training can help reduce operation and maintenance costs in several ways.

- Training can help operators improve operation and maintenance of expensive equipment. This can extend the life of the equipment thus reducing repair and replacement costs.
- Training can teach operators how to properly apply the chemicals used in the treatment process. This can save money which is often wasted on overapplication of these costly chemicals.
- Training can encourage operators to become more aware of the potential for using energy more efficiently within their systems. Energy represents a considerable portion of the operation and maintenance costs (often as much as 50 percent) for many treatment facilities. Thus energy conservation can lead to substantial savings.
- Training can help operators and community officials promote water conservation within the community as well as within the treatment system. Work in EPA Region V has demonstrated that flow reduction programs can result in considerable savings for communities of all sizes.
- Training in maintenance and repair of collector sewers can produce large savings. The GAO singled out infiltration/inflow problems caused by poor construction and leaky sewers as a major reason

for the failure of many treatment facilities to operate properly. A woeful lack of information about the cost effective correction of infiltration/inflow exists in many communities.

- Training can also lead to improved financial management of treatment systems. Helping plant managers employ effective billing procedures and efficient accounting practices can reduce operation and maintenance costs.

- Finally, training can serve as an enforcement tool thus reducing the cost of enforcement activities for EPA, the States, and for municipalities. By enhancing compliance, training can decrease the need for enforcement. In addition, increased emphasis on providing training and technical assistance will change the nature of the relationship between enforcement personnel and the municipalities in a positive way. Rather than threatening enforcement actions against the problem communities, which generally lack the know-how and resources needed to achieve compliance, EPA and the States can approach the community officials in a cooperative problem-solving fashion, recommending technical assistance and training to help them improve the operation of their facilities.

While the payback from certain aspects of training and technical assistance such as savings from proper application of chemicals, from energy conservation, and from correction of infiltration and inflow can occur after a relatively short period of time, it can take a number of years to realize the benefits from preventive maintenance of plant equipment. Nevertheless, we should not underestimate the importance of such long term savings. By adding an extra five years of life on to the plant via maintenance, a community can provide considerable savings to the users of its system. Moreover, the building of a wastewater treatment plant is a long term investment in the protection of our rivers and streams. Likewise, it is only reasonable to expect training to be a long term investment as well. Finally, it is important to recognize that the economic benefits resulting from training are not restricted to problem plants. Even facilities which are in compliance and have been so for a period of time can reduce costs through energy and water conservation, improved maintenance, and better financial management.

Why Federal Involvement?

Most individuals involved in the water pollution control business including EPA and the state regulatory agenicies recognize the need for training and the economic benefits it can provide. The questions are whose responsibility is it to see that training and technical assistance are provided and who should pay?

The Administration suggests that training is a state and local responsibility. Ideally, training should be the responsiblility of local communities. It should be explicitly included in the operation and maintenance costs of the system and paid for through local user fees. However, many municipalities remain unaware of the cost savings and environmental benefits which training can provide or they lack the resources or the political will to pay for it themselves. In addition, most states have been reluctant to give adequate support for training. Although some states such as California, Illinois, and Utah have developed active training and technical assistance programs, most have relegated training to a low priority.

This leaves us with two options. We could totally discontinue federal involvement in and support for training and hope that some day the states and local communities will assume the responsibility. Meanwhile, tons of conventional and toxic pollutants would continue to flow into our waters each day and the American consumers would continue to foot the bill for exorbitant operation and maintenance costs of these improperly operated systems. Or the federal government can continue its support for training.

ACWA strongly feels that EPA should not only continue funding technical assistance and training, but in addition, it should undertake a more active role in promoting these programs. The goal of EPA's training efforts should be to institutionalize training and technical assistance at the state and local levels. Ultimately, we would like to see the local communities assume responsibility for ensuring that their operators receive training. This can only be achieved by educating and informing state officials, mayors, public works directors, operator associations, and citizen groups on the availability and the benefits of training.

This, however, will not occur overnight. The environmental training profession is growing and maturing and it will take time to make the transition to a situation where the communities assume full responsibility for training. There are, however, several steps EPA can take to move toward this objective:

o EPA officials should speak out publicly on the need for training;

- the Agency should involve regional compliance officers and innovative/alternative technology coordinators in the oversight of training and technical assistance programs;
- EPA officials should participate actively in conferences and seminars on training and technical assistance;
- the agency should aim to strengthen existing training and information networks and work through these networks to demonstrate the value of training;
- EPA should do a better job of distributing training materials; and
- the agency should conduct or encourage evaluations of existing training and technical assistance programs.

How Should the EPA Training Money Be Allocated?

We would like to include in the record a copy of recommended guidelines for spending the FY 1982 training money which ACWA submitted to EPA. Briefly, some of our major recommendations include:

- EPA should channel funds through existing organizations with on-going programs and good performance records in training and technical assistance.
- EPA should devote a significant portion of the money to on-the-job training of plant operators and managers. The agency and other organizations have done a good job in the past producing training materials, developing curricula, and assessing the needs for training. It is now time to get the materials and the training to the operators that need assistance.
- EPA should provide substantial assistance to small communities which generally lack the in-house expertise and resources to carry out technical assistance and training on their own.
- The agency should provide assistance to organizations which have demonstrated the ability to reduce attrition rates, a major problem within the water and sewer workforce.
- Given the fact that EPA does not have the resources to fund training programs for the entire country, the agency should attempt to leverage training funds from other federal agencies (ie. the Department of Labor, the Department of Agriculture, and the military), from state agencies, and from private sources. In addition, it should devote most of its resources to demonstration projects in selected regions.

The Public Wants Clean Water

The American people have consistently supported strong water pollution control laws. Last fall, pollster, Lou Harris, found that about 90 percent of the American public opposed weakening the Clean Water Act. Ensuring that municipal wastewater treatment systems work properly and meet their required effluent standards remains a federal responsibility and the public will hold both EPA and Congress accountable. Training of sewage treatment plant operators is an efficient, non-controversial way to help maintain the progress toward cleaning up our waters.

The federal government has spent over $30 billion on construction of wastewater treatment systems during the last ten years and it may spend another $20 to 30 billion by 1990. The American people want to see that investment of their tax dollars protected. Training will help to achieve that end.

Senator GARN. As you know, last year I recommended additional funding for training.

As I indicated to Mr. Hilbert, if you are going to return more responsibility back to the local level, then I think we must insure that they have the training and technical assistance so they can assume the responsibility.

Ms. HORTON. The testimony that I will be presenting is presented on behalf of both the environmental program and the Utah Technical College in Provo and support of the National Environmental Trainers Association.

I would like to discuss three main points, and I would like to bring these home to Utah as an example. A case in point. One program out of 50.

The need for operator training, however, is nationwide, and studies have been done and they have been redone and the same factors seem to come in.

If the plant was well designed, if it is not organically overloaded, operators can do the job. They either don't have the skills and knowledge to operate the treatment plant or they cannot take the book learning and take the plant site and operate the plant.

Those are the problems that, as operator trainers, we key in on and those are the things that we can solve.

There are three portions also of operations that point out other training problems. EPA in the construction grants program allowed additional financial support for projects that used innovative and alternative types of processes. Although technology is increasing at all times, it is getting tougher and tougher to operate a treatment plant and the operators have to keep pace with the technology as it develops.

Second, the treatment plants were being asked to meet secondary treatment standards in a lot of cases in the small towns in the West. Right now we do not have anybody in there that can operate them. To set secondary standards in a lot of cases, theyhave to operate mechanical treatment plants and they are not prepared to operate something that complex with the present background.

And, third, Wyoming has seen a problem and living it. Utah is getting to the point where it is becoming a problem where local populations are dominant.

You see, in a situation like that, the operator knows he is overloaded, he knows he couldn't treat all of the waste water, but yet he has 5 years before he can get a treatment plant on line. He is asked to maximize the operation and do the best he can during the interim period.

So there is a need. I think everybody agrees with that. The operator should be trained.

So, EPA has put money into operator training in the past several years and Utah has been the recipient of some of this money.

I would like to share with you four areas where Utah has used Federal money and show you where the training program in Utah is concerned because of that money.

The first one is the workshop program. We offer workshops statewide for operators in water and waste water treatment. We trained aproximately 300 operators last year. And we just now are convincing them that they ought to be attending workshops. So we feel like we are in the beginning phases. But, yet, the workshops were seeded back in the early 1970's by EPA. Without that seeding, we would not have developed the program and have it there today.

Second, back 6 years ago, EPA funded some regional trainer's meeting and they were funded for 3 years. Then for 3 years, the meetings went on going without any favorable support. These meetings from region VIII is one spot where we can improve our skills as trainers and share problems of solution.

A meeting will be held this year in Orem in June, in just about 2 weeks, and one of the key items that we will be discussing with both of region VIII trainers and national figures is, How can we maximize the use of $75,000 at 109–b. We hope to get started about August. So we are trying to use the money that is available the best possible way and work together to make sure that region VIII, and each State within it, has use of the money available.

Third, the 109(b) center was funded out of the construction grant program. The building was completed last month and we moved in and we are still scrounging equipment and making the fire marshal happy and that whole group. But it is the hub of activity for the Utah operators, the place they can come and borrow books. They can call and request training. They can bring their plant problems to us and we find a superintendent that is capable of helping them solve the troubleshooting problems. It is their resource and it was put there with Federal money.

The last one is not mentioned in the paper but is a key item in the Utah training picture—the joint training coordinating committee. That is a group of environmental training within Utah and they include solid waste, air, waste water, anybody that we could find in the environmental training.

We get together on a regular cycle and discuss what the training needs are within the State and we will come up with a 6-month calendar so that we don't fight with the State over who is going to train that group this day.

We are trying to meet the total need within the State and coordinating our efforts so that we can do the best job with the money available.

That was started back in the early 1970's with EPA money. It has been ongoing since that time with no Federal support. All four of the programs began with seed noney and are now on their own or State supported or supported from tuitions from the municipalities and industry using that training.

That brings up the third point I would like to discuss, which is, Where does Federal support fit at this time? And we are not talking only financial support. We are talking a little bit moral support here, too, and that may be No. 1.

As a trainer in Utah, I want to be able to go to Maine and say, "I agree that you ought to train your operators, and what is important, EPA agrees that you ought to train your operators." We need to hear this coming. We need the support for the small towns. They are still hiring untrained people and trying to operate their systems and then wondering why it is not working. We need EPA support to say, "Maybe training is the answer. Why don't we look a little further?" And that is not financial. That doesn't cost a dime for EPA to come out and support the training effort.

Then we get to the part where funding is a help, the $75,000 that was used in plans, specific training. We will go and evaluate a small treatment plant. If it is not meeting the EPA discharge limitation because of an operator training program who has vouched that program in the plant, go back, reevaluate, read material so they can retrain if that operator quits and the plan, hopefully, will be in compliance. That is time and money intensive. And I don't know of a lot of small towns, say, 500 people, that can afford $5,000 or $6,000 to have that type of a service performed for them. There are some pulling in engineering firms and doing it, but those are the biggest guys, those are the Salt Lake cities.

But that is a place where with EPA support, at least for now, until we get that problem off the ground and get a staff built, that can handle that type of a training program.

The next problem we got is the students that I get in my office begging: "I want to be an operator; that is what I want to do. Can I finish my degree in two years?" And all I can say is, "No, there is no way they can finish the degree in 2 years, because I cannot hire a full-time staff member to teach those courses." Then I get the council from Freemont calling me and saying: "I need an operator; mine quit. I know we need someone trained, do you have any graduate?"

"No, we don't have any graduates."

We need some EPA support or somebody's support to come in and give us some seed money to start a 2-year degree program now, not feed it in over 10 years, but start now so we can build up the manpower force within the State.

If we don't, then we start importing from every place else.

As you were mentioning, there are different problems. You couldn't necessarily transplant the best operator in Florida, put him in Utah, and expect the plants to operate the same, because chances are, they won't.

We had a good system going with NTOC; they gave us somebody who said, "We need an expert on this; who do you know? We need information on this; what can you tell us?"

When NTOTC was not funded and we lost that resource, there is a void. And I think, probably more cost-effective than there are organizations in place now, such as the National Environmental Training Association that can handle a lot of that slack for a lot less money than maybe NTOTC was using for a full-time staff.

So there is a another place where EPA, with minimum support, can come to the aid of the trainers and help us get the work force out there trained and ready to do the job. We appreciate your time and any support that you can give us; we certainly appreciate that also.

[The statement follows:]

STATEMENT ON BEHALF OF UTAH TECHNICAL COLLEGE AT PROVO, UTAH, AND THE NATIONAL ENVIRONMENTAL TRAINERS ASSOCIATION

This testimony is presented on behalf of Utah Technical College at Provo, Utah and the National Environmental Trainers Association. Both organizations are dedicated to the training of operators and managers in the environmental field in order to improve water quality, operations efficiency, cost efficiency and energy conservation.

The Environmental Technology building at Utah Technical College at Provo is Utah's State Wastewater Operators Training Facility and was funded through Section 109(b) of P.L. 92-500.

As this hearing applies to the Clean Water Act (P.L. 92-500), the testimony will present data and support for federal supplementary funding for wastewater personnel training, although both organizations are also involved in air, culinary water, solid waste and hazardous waste training.

The need for wastewater operator training has been intuitively recognized for many years, and in 1980, the often quoted Hegg[1] study, funded by EPA, validated this belief. While evaluating treatment plants which were not hydraulically nor organically overloaded, Hegg found that the two primary reasons why treatment plants did not meet their National Pollutant Discharge Elimination System discharge limitations, was the operator's (1) failure to properly apply treatment concepts and (2) failure to understand treatment concepts. Both of these identified problems can only be solved through operator training.

The impact of inadequately trained operators is most clearly identified in relationship to the monitoring of treatment plant effluent compliance with NPDES discharge limitations. A Government Accounting Office report[2] stated that 87% of the treatment plants built with public funds were not meeting their discharge permits. Several justifications for this statistic are readily apparent.

1. Advancing Technology - Technology in wastewater treatment is improving and advancing continually. This fact was recognized by EPA when, under the construction grants portion of P.L. 92-500, additional

federal support was available for innovative and alternative processes. The innovative portion of the plant is allowed 85% funding, while the rest is funded at 75%.

As the name implies, these processes are new technology. Operators cannot be expected to effectively control these processes without adequate training.

2. Secondary Treatment Standards - The Clean Water Act mandates that wastewater treatment plants must meet secondary treatment standards by July 1, 1985. The technology of a secondary treatment plant far exceeds that of a primary treatment plant. Many wastewater treatment plants in rural areas in the west are stabilization ponds which are primary treatment systems. Where land is available, these systems can add chlorination, dechlorination, and additional detention capacity to meet secondary standards. However, with the decreasing availability of inexpensive land, rural areas are being required to upgrade to secondary mechanical treatment plants. The stabilization pond operator's philosophy of "what goes in must come out" is drastically changed, and he is faced practically overnight with 20th century technology. Total containment lagoons are also used in rural areas. This type of system has the advantage of zero discharge, but has been identified by the Department of Health in Utah as being a growing noncompliance concern. In a 1982 study by the Water Research Laboratory at Utah State University[3], municipal waste was identified as the most serious threat to ground water quality in Utah, and total containment lagoons are an important portion of the pollution problem.

3. Increased Local Populations - The energy boom areas are causing major compliance problems. It is estimated by a Utah Foundation Research Report[3], that in the next twenty years, Utahns will spend nearly $600 million to expand and improve wastewater treatment facilities. Utah is just beginning a boom era which may soon match the growth of other energy producing states. At the present time, 90% of the industrial dischargers and 66% of the domestic dischargers are in compliance with their NPDES discharge permits, but according to Department of Health officials, compliance is declining as population rapidly increases.

Rapid population growth causes a dual problem for operators. They will not only have to upgrade their operational skills in order to operate the new or upgraded treatment plant when completed, but will also be required to optimize the operation of their overloaded treatment plant during the years of planning and constructing a new plant. According to Utah Department of Health officials, training the operators will improve the chances of meeting discharge limitations during rapid growth because a qualified operator can maximize the capability of the plant, and at times, even extend the design capacity.

Examples of these problems can be described in every state in the union. While plant expansion and adequate engineering are a part of the solution, operator training is the ultimate solution since the operator has the final responsibility for effluent quality. Experience has shown that a good operator can make a poor plant operate efficiently, while a poor operator is often the root cause of the failure of an excellent plant.

It is extremely frustrating to see the GAO report, justifying the need for operator training, immediately followed by massive training budget cuts at all levels of government. Even during the past ten years when training was budgeted within EPA, only 21% of the $59 million was actually spent on training the environmental work force. It is estimated by a recent survey in the Washington Post[4] that throughout the 1980's, more than 50,000 new wastewater treatment plant operators will be needed (this is comparable to the demand for computer professionals). The need for training is well documented, and yet is continually low on budget priorities.

Federal support of the training effort through funding sections 104(g), 109(b) and 112 of P.L. 92-500 has had a positive influence on operator training nationwide.

Utah is an example of this impact. The following projects were initially seeded with training funds from EPA:

1. Workshops - The State of Utah received a 104(g)(1) grant to put on workshops for wastewater treatment plant operators. For the past two years, attendance at operator workshops has been increasing although federal support was ended. Workshops are now available

statewide and operating without federal or state support.

2. Regional Trainers Meetings - For three years, regional meetings were funded by EPA for Region VIII trainers, including the Utah trainers, to discuss new training materials and techniques and to solve mutual problems. For the past two years (and scheduled again in June, 1982) this group has met without federal support and is forming a liason that is efficient for working cooperatively on training efforts within the region.

   These trainers have already agreed to combine expertise in the management of the plant specific evaluations and operator training projects to be funded by EPA in FY83. The training dollars available will be more efficient and effectively spent by this cooperative effort.

3. Statewide Wastewater Operators' Training Facility - Utah's Operators' Training Facility was built on the Orem Campus of Utah Technical College at Provo. This facility is the headquarters for the workshop administration, contains a small lending library for the operators, houses some of the workshops, and will house a one year certificate and a two year degree program in wastewater treatment.

These three grants began UTC/Provo's operator training program which can be primarily maintained by either local tuitions for workshops, or eventually, through legislated support from the state.

Utah's program for operator training had a good start, but it is not complete. For example, funding at the state level is not available to hire instructors for tne two-year degree program which will train the future operators Further use of federal funds for this expense is the only viable solution for the next three years. This intimates that while federal funding for training may have to be reduced along with other programs, funding should not be totally abandoned.

1. Although students should pay tuition and workshop fees, supplementary federal support is necessary to keep the cost low enough for local entities to train their people. The cost of training becomes prohibitive if the entire cost of staffing is covered with the tuition and fees.
2. Plant specific training is the most effective operator training method

because it deals not in the generalities that workshops handle, but in specific plant problem solving that has a direct relationship with plant effluent quality. This type of training is incredibly expensive due to the intensity of time and manpower required. In the larger states, travel distance and time are also costly. This type of training should be federally supported on a continuous basis since wastewater plant training budgets cannot afford this type of technical assistance in most cases.

3. Organizations, such as the National Environmental Trainers Association, with the aid of federal funds can fill at least part of the void created by the loss of the National Training and Operational Technology Center and help to support the regional trainers in their cooperative efforts.

Wastewater operator training must be a multi-faceted program in order to meet the needs of the environmental work force. The trainers are a dedicated group, operating with minimal budges and expanding programs. Local governments are supporting training to the degree possible, but if training is to make a real impact on improving water quality, funding the Sections 104(g), 109(b) and 112 of P.L. 92-500 is vital.

REFERENCES

1. Hegg, B.A., et. al.: Evaluation of O & M Factors Limiting Wastewater Plant Performance. Journal of Pollution Engineering.
2. Report by the Comptroller of the United States; Costly Wastewater Treatment Plants Fail to Perform as Expected. November 14, 1980, CED-81-9 United States Accounting Office.
3. Utah Foundation Report; Utah's Growing Problem of Waste-Water Treatment. February, 1982, Report No. 424.
4. Treatment Plant Operators: Growth Area for the 80's, WPCF Highlights, Water Pollution Control Federation, Vol. 19, Number 4, April 1982.

ENTITLEMENT PROBLEMS

Senator GARN. Thank you, very much.

Your testimony has been very helpful.

We have a very difficult problem on our hands. One of the reasons that we do is because Congress is not willing to face up to the entitlement problems. That is where there is an incredible amount of growth in the budget. I think in many cases we have gone too far and we have shortchanged a lot of discretionary programs.

Let me give you a specific example from this subcommittee. During last year, we cut about $9 billion out of the subcommittee's overall jurisdiction, but several of the veterans programs, many of which are entitlements, were substantially increased.

We don't have the political courage on the Senate floor to face up to the fact that the real budget crises is in the automatic index programs and the Appropriations Committee has no authority over these programs. Unless somebody changes the rules, requirements, and the eligibility for people receiving funds from these programs, we are not only compounding budget problems, but we are taking away from discretionary programs where the dollar amounts are not that large in most cases.

We have some politicians screaming about social security, scaring all the old people in this country and putting out bumperstickers like, "Vote Democratic, vote security," and "It is all Reagan's fault, he wants to kick little old ladies."

It is not a matter of politics. It is a simple matter of arithmetic. If you don't face up to that problem, we are going to continue to have very high interest rates, high deficits, and then continue to cut discretionary programs.

In this subcommittee, we have approximately 19 agencies and several hundred programs. While there is a budget ceiling which I must follow, there are very little choices which I have concerning program levels because of the entitlement programs.

More than 70 percent of the entire budget is uncontrollable—uncontrollable in the Appropriations Committee in process—but not uncontrollable, if we have the willingness and the courage to go back to the authorizing committee and change some of the rules of the game. But we have not been willing to do that.

I feel very strongly about the training area. But, again, a good part of the budget is outside of my control. If I could make some of the priority shifts, there is a lot of them I would make.

Make me a dictator for about 3 days and I will solve a lot of your problems. I only say 3 days because I couldn't trust myself beyond 3 days with that kind of power. I would even take 24 hours. I would solve a lot of the problems.

I do appreciate your willingness to be here and thank you for coming.

STATEMENT OF RICHARD GLAZER

Mr. GLAZER. I would like to thank you for having me here today and providing me with the opportunity to speak.

The responsibility and necessity of educating and training a pollution control work force has become a long running debate between Congress and the Environmental Protection Agency.

For 3 years, the EPA has attempted to divest itself of this responsibility, putting the onus on what it likes to term, "market forces," refusing to recognize that because of the uniqueness and cost of this training, market forces have not and will not pick up this challenge. EPA's argument has been that it has no place in training nor should it expend taxpayers' moneys on such an effort.

As a former town supervisor, chief elected official of the town, and presently a candidate for the New York State Senate, I am well aware of the ramifications of excessive taxation and the need for relief for our taxpayers. I am equally aware, however, of the foolishness of believing that we can spend billions of dollars on plant construction and permit monitoring programs and have them function as designed without an adequately educated and trained work force.

No one would ever consider operating a Trident missile system, a B–52 bomber, or the new Army tank without intensively trained personnel.

However, this is exactly what we have been doing with our multimillion dollar waste treatment plants, permit monitoring, and toxic waste control programs. This is sheer folly and the Congress should no longer allow themselves to be an instrument of this recklessness.

It must, in no uncertain terms, demand that the EPA meet the mandates of Congress in assuring the worth of the multibillions of dollars spent in pollution abatement and control by providing the leadership and funding necessary to develop well-educated and trained engineers, plant operators, laboratory technologists, certification and permit program monitors, and regulation enforcement and maintenance personnel.

It is particularly essential that all those involved in the identification, monitoring, handling, and disposal of toxics in our waterways, ground waters, and drinking water supplies have access to continuing education and training programs with the highest priority on safety.

The purpose of my testimony is threefold. One is to make Congress aware of the extremely grave problems that have resulted from the administration's and EPA's policy of allocating zero funds for environmental work force training and development.

I recognize, Senator, you are well aware of that and I appreciate that.

The second is to make positive recommendations with respect to congressional support of these work force development programs, and the third is to point out that no new moneys are necessary to do this as $2.4 billion of supplemental construction funds appropriations is slowly moving through the legislative process.

If 1 percent of this money was earmarked for training, this would provide $12 million. This is a small price to pay to insure the effectiveness of our water pollution abatement programs and preserve the worth of the many billions of dollars spent in the construction of waste treatment plants.

What is particularly distressing is that over the years, EPA has reported that somewhere between 50 and 75 percent of municipal waste treatment plants, at any given time, are violating their permits.

The 1980 GAO report noted that:

> Our random sample of 242 plants showed an even drearier picture. For a 1-year period between 1978 and 1979, 87 percent of the plants in our sample violated the effluent discharge limits of their permit. Thirty-one percent were, in our opinion, in serious violation. In addition, 119 of the violating plants that were studied exceeded their discharge permit limits for more than half the year.
>
> When presented with these facts, it is no surprise that the goal of restoring and maintaining the chemical, physical, and biological integrity of our waters has not been achieved.

On the contrary, the continuing discoveries of toxic contamination of our waters and drinking water supplies are dramatic evidence that we have yet to achieve our goals of adequately protecting the public health.

The obvious question is, Why, why aren't the plants conforming as they should, what has happened to NPDES, and why is it so difficult to identify and control toxics in our waterways?

The Hegg report, published in the Journal of Pollution Engineering, gives us some immediate insight. Of 71 predefined factors which could potentially limit the performance of a biological wastewater treatment plant, the top 4 out of 5 problem areas were directly related to inadequate training.

The Internal Joint Commissions Committee on the Assessment of Human Health Effects of Great Lakes Water Quality for 1979-80, noted that, "For optimal operation, there is a continual emphasis on the need to improve plant operator training."

With all this data and reports of continuing facility, system, and program failure, due to a great extent to the lack of a continually trained and upgraded environmental work force, it seems incredible that the Environmental Protection Agency would continue their quest to reduce or eliminate training funds to produce the pollution abatement work force they so desperately need.

During these times of dwindling budgets, lower Federal assistance to the States, and irate taxpayers, it is nonsense for EPA to expect the States or local municipalities to take on a greater share of this training effort.

Therefore, I wish to recommend the following to Congress:

One. That the budget of $12 million, as appended to this testimony, be funded in its totality from the $2.4 billion in construction fund money. It is inappropriate to build new plants when we cannot operate the existing ones.

Two. That the following statement be placed into the new revisions of Public Law 92–500:

> The Environmental Protection Agency under Training Grants and Contracts, sections 109, 110, 111, and 112, will provide training grants and programs to support the continual development of a trained pollution control work force. This will include, but not be limited to, support of undergraduate programs and students in water quality technology, toxic chemical control, engineering and engineering technology, and specialized curricula and programs development.

Three. That funding be taken from the construction grant funds never to be less than 1 percent of these funds.

The moneys being requested here are not of the magnitude that would require financial sacrifices or have a major impact on the overall Federal budget. Rather, because they are so minimal in comparison with other requests, they often tend to be overlooked as too small to be able to accomplish anything of significance.

Actually, just the opposite is true, the few millions of dollars spent on manpower training has had a major impact on the worth of the billions of dollars spent on facilities construction and equipment purchases.

It is clear that if Congress does not refund the manpower training programs, it will have spent many billions of dollars on treatment plants, regulatory systems, and major national programs, while denying them the trained manpower that is necessary for these plants and programs to function and to be operational. It seems a shame that for so little money we are willing to risk so much.

I wish to thank the members of this committee for their graciousness and support and their continual commitment to our environmental programs.

Senator PROXMIRE. Thank you, very much.

The issue you are addressing is an authorizing committee issue and tomorrow the first witnesses will be some of the members of the Environment and Public Works Committee—Senator Chafee, Senator Stafford, and Senator Randolph.

I will make them aware of your recommendations to this subcommittee.

Thank you. We appreciate your coming.

SUBCOMMITTEE RECESS

The committee will stand in recess until 9:30 in the morning when we will continue to receive testimony from public witnesses concerning the various agencies' budgets which fall under the jurisdiction of this committee.

[Whereupon, at 5:15 p.m. Monday, May 24, the subcommittee was recessed to reconvene at 9:30 a.m. Tuesday, May 25.]

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT-INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1983

TUESDAY, MAY 25, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 9:33 a.m. in room 1224, Everett McKinley Dirksen Senate Office Building, Hon. Jake Garn (chairman) presiding.

Present: Senators Garn and Leahy.

CONGRESSIONAL WITNESSES

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM VERMONT

Senator GARN. The subcommittee will come to order.

I am happy to have with us this morning my distinguished colleagues, Senator Stafford and Senator Chafee. We know how busy you both are, so without further ado we will start with you, Senator Stafford.

Senator STAFFORD. Thank you very much, Mr. Chairman. It is a pleasure to be here. I will try to keep these remarks brief.

In developing our recommendations for the Budget Committee, the Committee on Environment and Public Works conducted hearings and heard from public and governmental witnesses. In addition, the committee staff spent considerable time examining the program impacts of various funding levels for the Environmental Protection Agency. Based on the information developed by the committee's hearings and staff, we concluded that while the funding cuts imposed on EPA last year were tolerable, at least temporarily, further reductions could cause serious and, perhaps, irreparable harm to environmental programs. Therefore, it was agreed that as a general principle that the operating budget of the Environmental Protection Agency should be maintained at fiscal year 1982 levels. Our reasons for this recommendation will be spelled out in greater detail by my colleagues. However, I would like to take this opportunity to specifically address the committee's recommendations on funding for the Comprehensive Environmental Response, Compensation, and Liability Act, which is a long fancy phrase for Superfund.

BUDGET FOR SUPERFUND

The committee also increased the funds available under the hazardous substance response trust fund, established by the Superfund law, from the requested level of $230 million to $250 million. This increase was in part to assure that Superfund activities at the Departments of Justice and Health and Human Services are fully funded without the necessity of site-by-site reimbursement.

On March 1, 1982, I wrote to the Departments of Justice and Health and Human Services to determine what funds, if any, the two Departments had received from Superfund. As of that date, neither of the Departments had received money from Superfund, despite the fact that both had been seeking a share for more than 1 year. As a result of this, health studies in several areas are being left undone. There have been releases in numerous States—New York, Tennessee, Kentucky, and Michigan, to name just a few—where medical studies could be and should be underway, but are not. The reason they are not is that they have been caught up in what appears to be bureaucratic infighting.

It was the Congress' intent when it enacted Superfund that independent and effective programs be operated [illegible] the Departments of Justice and Health and Human Services. We were so determined that HHS establish and maintain an effective program that the law required the creation of an agency to be known as the Agency for Toxic Substances and Disease Registry.

It was the committee's conclusion that the only way to force adequate funding for both the Departments was to pass the money directly from the fund to Justice and HHS. Our report to the Budget Committee stated the following, and I quote:

> Effective response to emergencies or sites is not possible without the use of trained medical personnel who know what treatment or precautionary measures are appropriate. This knowledge, in turn, is a product of the long-term health and laboratory studies which are mandated by the Superfund law. The establishment of an adequate Superfund program at the Department of Health and Human Services is as important as the establishment of the one at the Environmental Protection Agency.
>
> It is the Committee's intention that the necessary portion of the recommended increase in the Superfund budget be allocated directly to the Departments of Justice and Health and Human Services. While those Departments should consult with the Environmental Protection Agency in the development of their programs, the final responsibility and authority for implementation should lie with the respective departments, not the Agency.

We continue to believe that implementation of this policy is necessary if we are to have an effective health program under Superfund. Therefore, I hope that regardless of the total amount you make available to run the Superfund program, portions of the money are directly dedicated to the Departments of Justice and Health and Human Services.

It is also important that an adequate level of funding be made available directly to the Department of Justice for enforcement of the Superfund law. In addition, the maintenance of a credible environmental program in general requires adequate funding of all enforcement activities at the Agency, not just Superfund. It is imperative that lawyers and trained investigators be retained to assure that the Clean Air Act, the Clean Water Act, the Toxic Substances Control Act, the Solid Waste Act, and the many other pollution control laws achieve their respective goals of a healthy and safe environment.

Mr. Chairman, I thank you for giving me this opportunity to testify. Senator Randolph is unable to attend today's hearing, but asks I convey to you his recommendations regarding EPA. He is most interested in funding for the hazardous waste program State grant support in all areas. I have his statement, Mr. Chairman, I ask unanimous consent it might follow mine in the record.

Senator GARN. We will be happy to include Senator Randolph's statement in the record at the close of your testimony.

Bob, as a result of our conversation and a letter you and other members of your committee wrote to me on January 22, I did recommend in the urgent supplemental that $7 million in additional funds be earmarked for Superfund activities. Certainly we will take a look at the need to earmark funds for the Department of Justice in the 1983 budget.

Let me make one other point. In fiscal 1982 we did provide an additional $14 million more than the administration's request for Superfund. I think this subcommittee has been very sensitive to the Superfund issue. In fact, GAO has completed a study for us and OTA completed a 2-day workshop on the issue. Neither study indicated we needed more funding, but the problem was implementation. I look forward to working with you and other members of your committee to see if we can't get the implementation underway. I think that seems to be the key at this point.

Senator STAFFORD. Thank you very much, Senator. I am gratified to hear and learn what is being done.

Mr. Chairman, I, unfortunately, have two other committees, including the Environment and Public Works Committee, that are about to meet. Could I be excused to attend those?

Senator GARN. Yes; I would be happy to excuse you.

Senator STAFFORD. Thank you, sir.

Senator GARN. I appreciate your coming.

Senator STAFFORD. Senator Chafee will answer any questions I can't.

PREPARED STATEMENT

Senator GARN. Without objection, I would like to have Senator Randolph's statement inserted in the record at this point.

[The statement follows:]

STATEMENT OF SENATOR JENNINGS RANDOLPH

I thank the Chairman and Members of the Subcommittee for the opportunity to present testimony today. Oversight of many of the Environmental Protection Agency programs and consequently the Agency's budget is a major responsibility of the Environment and Public Works Committee. The Chairman of the Committee has eloquently and ably stated the factors considered by the Committee in formulating its recommendations to the Budget Committee. My remarks will be directed to two components of the proposal, funding for the hazardous waste program and state grants support in all the programs.

I call the Subcommittee's attention to two policies upon which the Agency formulated its budget request. First, EPA proposes to delegate greater responsibility to the States for management of their programs. Second, the Agency proposes to eliminate backlogs and fulfill statutory mandates. Simultaneously, the Administrator is proposing a 12 percent reduction in funding for the Agency compared to fiscal year 1982, and specifically recommends a 23 percent reduction in assistance to State programs.

In testimony received by the Committee during authorization hearings, it became evident that these policies and proposed funding levels are not consistent with the States or the Agency's ability to carry them out.

Representatives from State environmental programs have testified that they are unable to absorb the reductions in EPA grants, particularly when Federal commitments are being lessened across the board. Environmental programs are simply not at the top of the list when states allot their limited funds. One option available to the States is to simply return the responsibility for implementing various programs back to the Agency. This is hardly consistent with the concept of increased State delegation.

Another area that concerns our Committee is implementation of the hazardous waste program. The Agency has been slow to meet its statutory mandates. I have been encouraged recently by the issuance of some of the key regulations with respect to financial responsibility and liability requirements under the Act. Our Committee would like to see an effort on the part of the Agency to accelerate the permitting process for landfills and disposal facilities in consort with the implementation of the financial requirements. I offered an amendment that was adopted by the Environment and Public Works Committee to authorize an additional $5 million dollars to help shorten the 8 year period projected for issuing permits to all existing facilities. This combines with the additional $10 million our Committee is recommending for State hazardous waste management programs.

While it is clear that the American public wants a less wasteful government, it is also clear they do not want a retreat on the Federal Government's commitment to work toward a cleaner and healthier environment. This is confirmed by national polls and witnessed by the volume of mail I receive from West Virginians.

The Committee's recommendation of maintaining EPA's overall operating budget at about the same level as fiscal year 1982 represents a reasoned and balanced approach toward recognizing budgetary constraints while honoring our commitment to work toward a clean and healthy environment. I hope that the Members of the Subcommittee will give consideration to our recommendations as work proceeds on an appropriation measure.

STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM RHODE ISLAND

CONSTRUCTION GRANTS PROGRAM

Senator **Garn.** Senator Chafee, you may proceed.

Senator **Chafee.** Mr. Chairman, first I want to thank you for your continuous support of environmental matters, and I am particularly thinking back of the construction grants program which, as you know, is still tied up with the 1982 funds for the construction grants. As you know, it was impossible to proceed with that under the regular budget procedures of 1982 because the authorization legislation had not passed. The President wanted some reforms in that legislation. We did those reforms and came up with what I consider to be a very, very fine bill. Now the $2.4 billion, after lingering in the House for a long time, is over here right now on the floor with the urgent supplemental. That, of course, is the 1982 funds. The construction season is rapidly fleeing by. I want to thank you for the support you have given us with the $2.4 billion. I just hope, no matter what happens with the urgent supplemental, that we are able to get the $2.4 billion appropriated, because it would really be a shame if the whole construction season went by and no funds were available.

Senator **Garn.** I don't think I have ever had a more frustrating issue than this one. I thought we had it solved as long as 6 or 7 months ago, but we have continued to run into roadblocks in the House, despite the fact we were promised in January that would be their first order of business to go ahead with the appropriation. I couldn't agree with you more—the construction season is upon us. Many of the States have been out of money for several months and can't proceed any further with projects. I will continue to push. I don't know what else to do.

Senator **Chafee.** We can't ask anything more from you, Mr. Chairman. You have been a loyalist in this all the way. My statistics also show, as do yours, some 38 States are now out of money and just waiting around.

STATE AND LOCAL GRANTS

Now returning to the 1983 appropriations for EPA, the one thing I would ask the committee give particular attention to is the State and local grant portion of the budget. When we got into all of these environmental programs, of which you know there are a host of them, the objective was that the Federal Government would help the States in not only the enforcement but the monitoring of these programs over the years. And we have done that, and gradually we are leading the States to assume these responsibilities themselves. And I think it is commendable that half the States have achieved what is referred to as "delegation" in one or more of these major programs, such as clean air, clean water, or solid waste management.

The appropriation for 1981 was $268.5 million. That was cut in 1982 to $236.6 million, and the proposal for this year is $181.9 million, which is a rather substantial drop. It is a big drop from 1982 and, of course, when compared to 1981 is close to a 30-percent drop. Frankly, Mr. Chairman, it really is too much because we are sending the wrong signals to the States and local communities. It is the old story, in their judgments, that we lead them down the garden path that we are going to help them in monitoring these programs and getting them established, and then we pull the rug from under them. And some of them take the attitude, "Keep the whole thing, Federal Government," which, of course, isn't what we want.

So I would urge you, Mr. Chairman, and members of your subcommittee, to take a good, hard look at this level of funding. Frankly, I would like to see us stay at the 1982 funding. That is what is provided for in the budget resolution.

What will happen if we make drastic cuts is that, of course, we reduce means of reduction in the assistance to the States in monitoring toxic waste dumps, air quality, water quality, drinking water quality, but also not only the monitoring of it but the enforcement. So I would urge the subcommittee and you, Mr. Chairman, to do what you could to maintain that at the 1982 level, or as close thereto as you feel you can do. I am here because we believe this is important.

COMBINED SEWER OVERFLOW

Finally, Mr. Chairman, on another point. In the 1981 amendments to the Clean Water Act—and that is the construction grants program part of it—we provided for correcting a problem that affects the older urbanized cities, a problem that is what we call CSO. It is combined sewer overflow. This comes about because the older urbanized cities have the same drains for sewage and for the rainwater, and when the rainwater pours into these drains you then get an overflow. There are ways of correcting this through various techniques, and we provided a specific authorization of an additional $200 million starting in 1983 thereon. However, we reduced it to $100 million for 1983. In the outyears it is $200 million. And that is very, very important, Mr. Chairman, that additional amounts to the construction grants program, and I urge you to do what you can to assist us in that.

Senator GARN. Senator Chafee, I appreciate your coming today, and particularly your comments on EPA's State and local grant programs. I agree with you. We had a long discussion about this yesterday about the grant program and technical training and assistance programs. I agree with you that it is wise to return those programs to the State and local government, but we can't do it without providing them a reasonable transition and also the training and technical assistance in which to operate these programs. We have some statistics that show approximately 87 percent of the plants are not operating up to their design specifications, and about half the reason is a result of operator training. I agree a 23-percent cut in these programs is really very unwise, and we will try to keep them at a higher level.

One final point. I would appreciate it if you could provide for the record an estimate as to what could actually be obligated in fiscal year 1983 for combined sewer overflows.

Senator CHAFEE. Right, we will do that.

[The information follows:]

LETTER FROM SENATOR JOHN H. CHAFEE

AUGUST 4, 1982.

Hon. JAKE GARN,
Chairman, Appropriation Subcommittee on HUD and Independent Agencies, U.S. Senate, Washington, D.C. 20510.

DEAR JAKE: During my appearance before your subcommittee in reference to an appropriation for the municipal wastewater treatment construction grants program, we also discussed the special program that was established in Public Law 97-117 to deal with the problem of pollution caused by combined sewer overflows. As you know, a solution to the problem of pollution from combined sewers is of critical importance in my home State. Without some appropriations for this program, it is unlikely that Narragansett Bay will ever meet existing water quality standards.

In order to respond to your inquiry regarding the amount of money that would be obligated under this section of the Clean Water Act, I asked the Environmental Protection Agency to conduct a survey of the States. In this regard the Association of Metropolitan Sewerage Agencies also conducted a survey of their member agencies. Both informal surveys determined that the total which could be obligated in fiscal year 1983, to the type of projects eligible for funding under this authority, is approximately $136 million.

I hope that this information will be of use to you during the subcommittee's deliberations on the 1983 budget for the Environmental Protection Agency.

Sincerely,

JOHN H. CHAFEE,
U.S. Senator.

DESIGN ENGINEERS TO MONITOR OPERATIONS

Senator CHAFEE. One thing that might interest you. The new construction grants program which we, the authorization committee, enacted last year, was to provide for far greater supervision by the design engineers. They have to monitor the operation for a year after it is turned over to the municipalities. So, there is a darn good training program there, which I think will solve a lot of the problems that you pointed out as regards the operation.

Senator GARN. Thank you very much. I appreciate your testimony.

Senator CHAFEE. Thank you, Mr. Chairman.

Senator LEAHY. Mr. Chairman, before you leave, I just would like to note for the record, I am sorry that another matter delayed me much longer than I had anticipated and I wasn't here for the testimony of the distinguished chairman of the Environment and Public Works Committee, my senior colleague from Vermont. I would like to note for the record that all Vermonters, in a totally nonpartisan way, are extremely proud of the work of Senator Stafford. He has been one of the leaders in the environmental movement over the years. This is not unexpected considering his roots both as a Governor of the beautiful State of Vermont as well as a representative in both bodies of the Congress over the last 20 years. But I know you, as chairman of this subcommittee, and the other members of the committee will listen with a great deal of interest to his testimony because of his very strong and very commendable credentials.

Senator GARN. Thank you very much, Senator Leahy. I appreciate those comments.

Senator Leahy [presiding]. Is Mr. Ronnie Lupe, tribal chairman of the White Mountain Apache Tribe here? [No response.]

Mr. Scheer, why don't we take you out of order, and I am sure you could probably find, if we do that, more exciting things to do for the rest of the morning than sitting in this hearing room.

NONDEPARTMENTAL WITNESSES

Environmental Protection Agency

STATEMENT OF JOHN M. SCHEER, PRESIDENT, WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION, INC.

Mr. Scheer. I appreciate that, Mr. Chairman. My remarks are very brief and to the point, so I, therefore, request the chairman's permission to read them for the record.

Mr. Chairman, my name is John Scheer, president of the Water and Wastewater Equipment Manufacturers Association, Inc. (WWEMA). I am pleased to be here today to discuss the views of WWEMA concerning appropriations for the fiscal 1983 construction grants program.

CONSTRUCTION GRANTS PROGRAM

WWEMA is an association of over 160 corporations that develop technology and manufacture or supply equipment, materials, and services to the water and wastewater utilities. We provide equipment or systems which account for approximately 20 percent of the total dollars spent under the Clean Water Act's municipal construction grants program and provide an equal amount to industry.

The Clean Water Act of 1972 encouraged industry to allocate more resources to the clean water industry. Traditional suppliers of wastewater equipment invested in new and enlarged manufacturing facilities. New and more cost-effective technology has become available. In short, WWEMA members responded in the best tradition of free enterprise to congressional leadership.

Since 1972, over $19 billion have been appropriated below the authorized level and $20 to $70 billion less than documented needs. Further, appropriations are not agreed to until late in the budgetary process. Congressional inaction gives rise to a lack of continuity, predictability, and stability to the clean water programs. Even today, Congress seems to overlook the urgency of appropriating $2.4 billion for 1982 needs.

Congressional leadership is essential if we are to reverse further deterioration of the clean water program momentum. Manufacturers, contractors, and consulting engineers are redirecting their personnel and reducing staff. Forty-five percent of our members have redirected their resources or left the marketplace. This rapid turnover of equipment suppliers leads to reduced equipment quality, technical innovation, and available services for clean water progress. Renewed congressional budget leadership is necessary to restore cost effectiveness to the clean water program.

RECOMMENDATION FOR FISCAL YEAR 1983 BUDGET

Specifically, WWEMA recommends the following:

One. That Congress appropriate $2.4 billion early in the 1983 budget process. The $2.4 billion to be appropriated for fiscal 1982 can be easily obligated by the Environmental Protection Agency by the end of this fiscal year. If Congress once again prolongs the fiscal 1983 appropriations, we will continue to be faced with uncertainty and instability in the construction grants program. Congress will witness further unemployment and reductions in equipment services, quality, and technical innovation.

Two. Congress is urged to direct the Environmental Protection Agency to mandate progress payments for equipment, for reduced costs, and for manufacturer's economic viability. Suggested language for EPA's procurement regulations is attached. The industry found over the past several years that an EPA guidance memorandum encouraging the use of progress payments has not been effective, compounded by slow Government payments.

By mandating progress payments for undelivered specifically manufactured items of equipment in the proposed EPA procedurement regulations, EPA will reduce the cost of equipment to the grantee by reducing the interest component of equipment prices. Second, it will achieve a leveling out of cash outlays for specific projects and for the program as a whole if progress payments are made. And third, mandatory progress payments will encourage competition in the equipment field from small firms with minimal capitalization.

An appropriation of $2.4 billion early in the budget process and mandated progress payments are minimum commitments if manufacturers are to maintain their current level of expertise and resources. Past funding uncertainties have contributed to erosion of incentives for investment in innovative technology and clean water progress. Changes and delays in funding levels have resulted in excessive costs because of interruptions in manufacturing lines, employment, and financing.

WWEMA would like to thank the subcommittee for their interest in prompt and increased appropriation levels. If you have any questions, I would be happy to answer them at this time.

TRAINING PROGRAMS FOR PLANT OPERATORS

Senator LEAHY. I do, and I appreciate your testimony. I really have only one question. I looked through the GAO report—they were up here for an earlier hearing—in anticipation of your testimony and people similarly situated. I found that some of the equipment such as you manufacture, according to their report, after it has been installed, is often not operated or maintained properly by the people that take it over. It may have been installed perfectly properly so it would work fine if properly maintained, but it is not. Do you think that EPA should continue its training programs for operators of wastewater treatment projects?

Mr. SCHEER. I definitely do. Not alone EPA, whether it is on a National or a State level, I think it is essential to the good of the future of the program that training and upgrading of operators is essential, because we are dealing with very sophisticated plants today as compared to years ago.

Senator LEAHY. That is the impression I have had. It seems a shame to raise the money, get the things in, go to all the work of doing a quality job of manufacturing, and then not have it work. It is sort of like giving somebody a fine automobile to use as a salesperson but then doing absolutely nothing to maintain it afterward.

Thank you, I appreciate that answer. I especially appreciate it because I happen to agree with you. I think coming from someone like yourself who has worked in the real world, I think it is appropriate.

PROGRESS PAYMENTS

Mr. SCHEER. Mr. Chairman, I have one small statement to make concerning progress payments for specifically manufacturing equipment. If mandatory progress payments are required on projects, especially with reduced funding as we are witnessing today and further reductions in the future, you will witness approximately a 5- to 10-percent reduction in cost if progress payments are given on that project. So if we are looking at a $2 million project, you are looking at a savings of $200,000. That is the only comment I have there.

Senator LEAHY. It is a good point I wish more people would make.

Mr. SCHEER. So anything you can do to assist us along that line we would appreciate.

Senator LEAHY. Thank you very much. I appreciate your taking the time to come down. I think sometimes people—I don't know if you have ever testified here before——

Mr. SCHEER. Yes, I have.

Senator LEAHY. We sometimes see all the things on television about how the Congress operates and these grandiose hearing rooms, and so on. Most of them are not like that. Most of them are quiet hearing rooms like this. But building a record is probably far more valuable than the big, well publicized hearings. I appreciate your taking the time.

Mr. SCHEER. Thank you.

[The statement follows:]

STATEMENT OF JOHN M. SCHEER, PRESIDENT, WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION, INC.

Mr. Chairman and Members of the Subcommittee, my name is John M. Scheer, President of the Water and Wastewater Equipment Manufacturers Association, Inc. (hereinafter, WWEMA). I am pleased to be here today to discuss the views of WWEMA concerning appropriations for the fiscal 1983 Construction Grants Program.

WWEMA is an association of over 160 corporations that develop technology, and manufacture or supply equipment, materials and services to the water and wastewater utilities. We provide equipment or systems which account for approximately 20 percent of the total dollars spent under the Clean Water Act's Municipal Construction Grants Program and provide an equal amount to industry.

The Clean Water Act of 1972 encouraged industry to allocate more resources to the clean water industry. Traditional suppliers of wastewater equipment invested in new and enlarged manufacturing facilities. New and more cost-effective technology has become available. In short, WWEMA members responded in the best tradition of free enterprise to Congressional leadership.

Since 1972, over $19 billion dollars have been appropriated below the authorized level, and $20 to $70 billion less than documented needs. Further, appropriations are not agreed to until late in the budgetary process. Congressional inaction gives rise to a lack of continuity, predictability and stability to the Clean Water Program. Even today, Congress overlooks appropriating $2.4 billion for 1982 needs, while new bills are being introduced for Public Works programs to counter unemployment.

Congressional leadership is essential if we are to reverse further deterioration of the Clean Water Program momentum. Manufacturers, contractors and consulting engineers are redirecting their personnel and reducing staff. Forty-five percent of our members have redirected their resources, or left the market. This rapid turnover of equipment suppliers leads to reduced equipment quality, technical innovation, and available services for clean water progress. Renewed Congressional budget leadership is necessary to restore cost effectiveness to the clean water progress.

Specifically, WWEMA recommends the following:

1. That Congress appropriate $2.4 billion early in the 1983 budget process. The $2.4 billion to be appropriated for fiscal 1982 can be easily obligated by the Environmental Protection Agency by the end of this fiscal year. An additional $2 billion for

Public Works can be cost-effectively utilized in approved projects pending. If Congress once again prolongs the fiscal 1983 appropriations, we will continue to be faced with uncertainty and instability in the Construction Grants Program. Congress will witness further unemployment, and reductions in equipment services, quality and technical innovation.

2. Congress is urged to direct the Environmental Protection Agency to "mandate" progress payments for equipment, for reduced costs and for manufacturer's economic viability. Suggested language for EPA's Procurement Regulations is attached. The industry found over the past several years that an EPA guidance memorandum encouraging the use of progress payments has not been effective, compounded by slow government payments.

By "mandating" progress payments for undelivered specifically manufactured items of equipment in the proposed EPA Procurement Regulations, EPA will reduce the cost of equipment to the grantee by reducing the interest component of equipment prices. Second, it will achieve a leveling out of cash outlays for specific projects and for the program as a whole if progress payments are made. Third, mandatory progress payments will encourage competition in the equipment field from small firms with minimal capitalization.

An appropriations of $2.4 billion early in the budget process and and mandated progress payments are minimum commitments if manufacturers are to maintain their current level of expertise and resources. Past funding uncertainty has contributed to erosion of incentives for investment in innovative technology, and clean water progress. Changes and delays in funding levels have resulted in excessive costs because of interruptions in manufacturing lines, employment and financing. WWEMA would like to thank the subcommittee for their interest in prompt and increased appropriation levels.

ATTACHMENT

Recommended Language on Progress Payments for EPA Procurement Regulations:

"(a) EPA policy is that grantees shall make prompt progress payments to prime contractors. Prime contractors shall also make prompt progress payments to subcontractors and suppliers for eligible construction, material, and equipment costs, including those of undelivered specifically manufactured equipment, incurred under a contract under an EPA construction grant.

(b) Payments for undelivered specifically manufactured items of equipment (excluding off-the-shelf or catalog items) shall be made as work on them progresses. Provisions for progress payments therefore shall be included in the bid and contract documents if all of the following conditions exist:

(i) The equipment is so designated in the project specifications;

(ii) The equipment to be specifically manufactured for the project could not be readily utilized on, nor diverted to, another job; and

(iii) A fabrication period of more than six (6) months is anticipated.

STATEMENT OF FRANCIS A. DIGIANO, PRESIDENT, ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS

Senator LEAHY. Is Dr. DiGiano here?

Dr. DIGIANO. Yes.

Senator LEAHY. Dr. DiGiano, why don't you go ahead, sir. Do you have an extra copy of your testimony?

Dr. DIGIANO. Yes.

Senator LEAHY. Thank you. Go ahead.

Dr. DIGIANO. Senator Leahy, I appreciate the opportunity to appear before your subcommittee today. I will be abstracting from my testimony, which is for the record.

Senator LEAHY. I appreciate it. The whole statement will be made a part of the record. Please go ahead.

ABSTRACT OF STATEMENT

Dr. DIGIANO. My name is Francis DiGiano. I am a professor of environmental sciences and engineering at the University of North Carolina-Chapel Hill, and I appear today in my capacity as president of the Association of Environmental Engineering Professors. Our membership is comprised of faculty at over 100 major universities in 36 States in the United States and in Canada which have programs of study in environmental engineering.

RESEARCH PROGRAMS IN EPA

Our members are engaged in both short-term and long-term research related to EPA's congressionally mandated mission. These research efforts have always been vital to EPA and its predecessors in accomplishing their goals. Over the past 20 years, the educational programs I refer to have produced most of the environmental engineers who now work in industry, State and Federal agencies, and consulting engineering firms.

The mandate of Congress, as set forth in several excellent pieces of legislation, emphasizes the need for research to solve the problems which stand in the way of achieving a clean and safe environment for the people. However, the signal being sent by EPA contradicts this mandate. Our association deplores the continued demise of EPA's extramural research program which has been reduced from $199 million in fiscal year 1981 to $189 million in fiscal year 1982, and is now proposed to be cut to just $133 million in fiscal year 1983. Unfortunately, this comes at a time of great need for a sound scientific base for Federal and State regulations. The question is, How will the widely acknowledged gaps in the scientific data base be filled if R&D funding is insufficient?

WATER QUALITY RESEARCH

A severe blow is being dealt to water quality research. It is our understanding that the 50-percent reduction in funding includes elimination of all extramural research in such areas as the ecological effects of effluent discharges and the development of site-specific water quality criteria for toxic pollutants. With regard to toxic pollutants, research on biological monitoring, standardization of toxicity tests, validation of predictive strategies, and establishment of safe concentrations are all needed for development of a sound policy which is neither overprotective nor underprotective of aquatic life.

In order to provide the Nation with a substantial base of fundamental research knowledge, Congress mandated that 15 percent of R&D funds be designated for this effort. EPA responded by establishing the exploratory research program. Unfortunately, the best this program ever managed to get was 11 percent of the R&D budget. With the large R&D cuts proposed for fiscal year 1983, the most optimistic budget for this program is just $12.4 million. The university grants program component is now projected to be just $9 million. This is a cumulative reduction of 75 percent over 3 years and places it in a phaseout mode, according to some EPA program managers.

Also in jeopary in fiscal year 1984 are the eight newly established exploratory research centers of excellence located at universities. While these are to be funded in fiscal year 1983, they remain vulnerable if the Office of Exploratory Research continues to suffer severe budget cuts. An important scientific resource which can support EPA's mission will be lost if this trend continues.

Extramural funding for drinking water research is being reduced from $21 million in fiscal year 1982 to $15 million in fiscal year 1983. Yet, at the same time, the GAO reports that 13,600 community water systems cannot meet any Federal water quality standards unless these facilities are improved. University research has been shown to be important in this area. For example, in the past leading university researchers were able to help establish scientific data on inadvertent production of trihalomethance in water treatment and methods of control, and this contributed to EPA's recent regulatory effort.

R&D PROGRAMS AT UNIVERSITIES

There are currently 1,500 students being trained in water and wastewater engineering and another 1,000 in air pollution control and environmental studies. However,further reductions in R&D, especially in wastewater treatment technology and water quality effects, will erode administrative support for such graduate programs at many universities, dull student interest in environmental engineering and science careers, and threaten to redirect the research interests of highly competent faculty away from environmental protection. A valuable national resource for scientific discovery and development of future leaders will be lost.

Admittedly, EPA's dual role of regulation and research in support of regulation is a difficult combination to carry out. The R&D budget cuts might not be so critical if other agencies were available to pick up the slack. Unfortunately, this is not the case. The Office of Water Research and Technology in the Department of the Interior has been eliminated and NSF's budget has not increased enough to accommodate the additional requests for support. For example, NSF expects the combined effects of the Office of Water Research and Technology's elimination and EPA's budget cuts to place an additional demand of $9 million on their water resources and environmental engineering program.

INCREASES IN EPA'S BUDGET

Senator LEAHY. I agree with that. I don't think further cuts are acceptable. If you were going to increase their budget, where would you increase if you were going to increase EPA's budget?

Dr. DIGIANO. I would say, particularly in the area of drinking water research, there is a great need. I think in the water quality area, where the emphasis has been on toxic contaminants and the control of these in our surface water, that we don't have the sufficient data base for that. The drinking water research is a new area which has been increased in funding, it is true, but compared to other countries and well-developed countries in Europe we are spending far less money on research to implement the technology that we can to protect many of our people in large cities, particularly large cities where they are being serviced by vulnerable water supplies.

POLLUTION CONTROL REGULATIONS

Senator LEAHY. One of the things people have been talking about is cutting back on the research and development funds of EPA. Is the business community going to find that the pollution control regulations are going to be more or less reasonable if we cut back on those R&D funds?

Dr. DIGIANO. I think that the business community will feel more comfortable with better scientific data bases for regulation. I think one of the difficulties we have had in the past has been that the data base has been insufficient, in many cases, and so critical questions have come up which have forced EPA to withdraw from a position of regulation without having that data base.

Senator LEAHY. It has sort of been shooting in the dark in that regard.

Dr. DIGIANO. I think that is a problem. The point I think is important is that the balance between the long-term and the short-term research typically—and it is a problem I admit I don't have a good answer to—but the short-term research which is necessary for today's problems is not answering the question of what the problems are going to be 5 and 10 years from now. And the problem gets to be very severe when regulations are imposed and construction of pollution control equipment is in place and new information becomes available that says that we need to do more. And so money is being spent for pollution control and it is ineffective.

Senator LEAHY. OK, thank you, sir, I appreciate that. I appreciate your coming in. I have had a chance to look at your testimony. I think the reason we didn't have your copy here is I perhaps left it at my desk. But I do appreciate the testimony. It is extremely helpful.

Dr. DIGIANO. Thank you very much for giving me the opportunity to appear. I appreciate that.

Senator LEAHY. Thank you.

[The statement follows:]

STATEMENT OF DR. FRANCIS A. DIGIANO, PRESIDENT, ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS

Mr. Chairman, members of the Senate Appropriations Committee, I appreciate the opportunity to appear before you. I am Francis A. DiGiano, Professor of Environmental Sciences and Engineering at the University of North Carolina - Chapel Hill and appear today in my capacity as president of the Association of Environmental Engineering Professors (AEEP). Our membership is comprised of faculty at over 100 major universities in 36 states in the U.S. and in Canada which have programs of study in environmental engineering.

Our members are engaged in both short-term and long-term research related to EPA's Congressionally mandated mission. Short-term research focuses on narrowly defined, regulatory problems and is closely directed by EPA. Long-term research, on the other hand, is more exploratory in nature and anticipates problems which will be of concern to EPA in the future. These research efforts have always been vital to EPA and its predecessors in accomplishing their goals. Over the past 20 years, the educational programs I refer to have produced most of the environmental engineers who now work in industry, state and federal agencies, and consulting engineering firms.

AEEP is deeply concerned about the lack of direction in EPA's Office of Research and Development as evidenced by the lack of the EPA Administrator to nominate a new Assistant Administrator to fill the vacancy created over a year ago. Undoubtedly, these conditions have not only contributed to a lack of direction, but also to a FY 83 budget for R&D which is totally inadequate to meet the Agency's and the nation's needs.

The mandate of Congress, as set forth in several excellent pieces of legislation, emphasizes the need for research to solve the problems which stand in the way of achieving a clean and safe environment for the people. However, the signal being sent by EPA contradicts this mandate. AEEP deplores the continued weakening of EPA's extramural research program which has been reduced from 199 mil in FY 81 to 189 mil in FY 82, and is now proposed to be cut to just 133 mil in FY 83. Unfortunately, this comes at a time of great need for a sound scientific base for federal and state regulations. For example, the California State Senate last year pleaded with the House Appropriations Sub-committee on HUD-Independent Agencies to release impounded R&D funds because they feared an irreversible setback in the quest for a better scientific base in support of regulations protecting human health. Then, too, the National Academy of Engineering Roundtable concluded recently that EPA should continue to be responsible for educational (including training of graduate students) and R&D segments of the Clean Water Program. Leading consulting engineers have publicly expressed their concern over the lack of a scientific base with which to advise their industrial and municipal clients on how to comply with environmental regulations. Within EPA, Deputy Administrator Hernandez has just asked that the scientific data base supporting the regulatory effort be reviewed by the EPA Science Advisory Board. How will the widely acknowledged gaps in the scientific data base be filled if R&D funding is insufficient? What is the rationale for replacing "science," which had sometimes been flawed by less than complete research, with virtually "no science"?

A severe blow is being dealt to water quality research. It is our understanding that the 50 percent reduction in funding (13.3 mil. down from 28.5 mil) includes elimination of all extramural research in such areas as the ecological effects of effluent discharges and the development of site specific water quality criteria for toxic pollutants. With regard to toxic pollutants, research on biological monitoring, standardization of toxicity tests, validation of predictive strategies, and establishment of safe concentrations are all needed for development of a sound policy which is neither overprotective nor underprotective of aquatic life. There is clearly an urgent need for scientific data to support EPA developed water quality criteria, state water quality standards and the regulatory effort in general. The in-house FY 83 budget (since the present budget proposal does not allow for any extramural research) for research on these issues is only 0.9 mil. The Great Lakes Research Program is also being eliminated just when signs of progress in pollution control begin to emerge. To cite one example, university research supported by EPA led to a phosphorus control strategy which gave spectacular improvement to the shoreline at Harbor Beach, Michigan, and this strategy is now ready to be investigated and used elsewhere.

In order to provide the nation with a substantial base of fundamental research knowledge, Congress mandated that 15 percent of R&D funds be designated for this effort. EPA responded by establishing the Exploratory Research Program. Unfortunately, the best the Exploratory Research Program ever managed to get was 11 percent of the R&D budget. With the large R&D cuts proposed for FY 83, the most optimistic budget for this program is just 12.4 mil. The University Grants Program component has been reduced from 26 mil in FY 81 to 16 mil in FY 82 and is now projected to be just 9 mil in FY 83. This is a cumulative reduction of 75 percent and places it in a phase out mode according to some EPA program managers.

Also in jeopardy in FY 84 are the eight newly established, Exploratory Research Centers of Excellence located at universities. While these are to be funded in FY 83 (4 mil), they remain vulnerable if the Office of Exploratory Research continues to suffer severe budget cuts. An important scientific resource, which can support EPA's mission, will be lost if this trend continues.

Drinking water research is being reduced from 21 mil in FY 82 to 15 mil in FY 83. Yet, at the same time, the GAO reports that 13,600 community water systems cannot meet any federal water quality standards unless these facilities are improved. It is especially discouraging that little of the extramural drinking water research in FY 82 was done by universities and much less is likely in FY 83. Yet, university research has been shown to be important. For example, leading university researchers were able to help establish scientific data on inadvertent production of trihalomethanes (a group of suspected cancer causing chemicals) in water treatment and methods of control, and this contributed to EPA's regulatory effort.

Despite recession and inflation, the public assigns a high priority to environmental protection. This is evidenced by the editorials and feature articles appearing in national magazines and leading newspapers. The need for improved scientific knowledge and for training of environmental engineers will continue regardless of the avowed shift of regulatory responsibility back to the states. The information is essential regardless of the regulatory agency.

University graduate programs in environmental engineering have much to offer in assuring progress in environmental protection. There are currently 1500 students being trained in water and wastewater engineering and another 1000 in air pollution control and environmental sciences. However, further reductions in R&D, especially in wastewater treatment technology and water quality effects, will erode administrative support for such graduate programs at many universities, dull student interest in environmental engineering and science careers, and threaten to re-direct the research interests of highly competent faculty away from environmental protection. A valuable national resource for scientific discovery and development of future leaders will be lost.

Environmental Science and Technology, a leading technical journal, reported that the proposed EPA R&D cuts will mean 1500 fewer senior researchers and 4000-5000 fewer of their associates would be working on EPA projects. Further, even if the decision is made in 1984 to rebuild the R&D program, it would be 1990 before a flow of research results equivalent to the present could be reestablished.

Protection of the environment is a national responsibility. We must maintain a viable, high quality base of external research and training as well as exploratory, long-term research even though the results may not be directly related to an immediate regulatory effort. In fact, it is likely that regulatory decisions reached on the basis of short-term research, which ignore examining all implications, could waste capital investments for pollution control equipment. For example, fine particles emitted into the atmosphere are not removed by in-place, electrostatic precipitators, yet these devices were required of industry before the recent results of exploratory research showed that fine particles are a health hazard. Now, new investments will be required to remove these particles.

Admittedly, EPA's dual role of regulation and research in support of regulation is a difficult combination to carry out. The R&D budget cuts might not be so critical if other agencies were available to pick up the slack. Unfortunately, this is not the case. The Office of Water Research and Technology (OWRT) in the Department of Interior has been eliminated and the National Science Foundation's (NSF's) budget has not increased enough to accommodate the additional requests for support. For example, NSF expects the combined effects of OWRT's elimination and EPA's budget cuts to place an additional demand of 9 mil (over the 6.5 mil currently budgeted) on their Water Resources and Environmental Engineering Program.

Cost-effective, reasonable, and technically sound solutions to very complex problems created by the wastes of our advanced technological age can be found only if there is a sense of continuity in the R&D policy and extramural support in EPA. It is short sighted not to capitalize upon the breadth of capabilities, extent of physical facilities, and diversity of talent existing outside the EPA.

Just as important, it is short sighted not to provide a better balance between long-term research and specific and directed research. Further, AEEP believes the drastic reductions in EPA's R&D spending for FY 83 to be disproportionately larger than that demanded of other segments of government in the effort to reduce the national deficit. Given the assumption that budget cuts are inevitable, the concerns expressed by AEEP can at least be lessened by

. providing a better balance between internal and external R&D

. continuing fundamental, exploratory research.

Thank you.

STATEMENT OF JONATHAN LASH, STAFF ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

Senator **Leahy**. We will next go to Mr. Jonathan Lash, staff attorney with the National Resources Defense Council, who is also here on behalf of the Sierra Club and Friends of the Earth.

Mr. **Lash**. Senator, good morning. It is a particular pleasure to appear before you, Senator Leahy, because of your record in recent months of what we see as a courageous and intelligent effort to restore the budget of the Environmental Protection Agency.

Senator **Leahy**. I appreciate that, especially because there are others who see it as sort of a long shot. I like your version a lot better.

Mr. **Lash**. Senator, we feel certain you will manage in the coming months to persuade 12 more of your colleagues to agree with your view and you will eventually prevail. We are quite hopeful that in the House a more intelligent view will prevail in the first instance in the next few days.

I can considerably shorten my testimony since in this case I am speaking to someone who is better informed than I am on the effects of budget cuts at EPA. I would ask my written testimony be submitted for the record.

Senator **Leahy**. It will be.

Mr. Lash. I would like to just touch on a few points.

REDUCTIONS IN EPA'S BUDGET

As you said, Senator, I am a staff attorney with the Natural Resources Defense Council. I appear not only on behalf of NRDC but the Sierra Club and Friends of the Earth.

I talked to a reporter in Miami the other day, and she sent me a story quoting John Hernandez, the Deputy Administrator of the Environmental Protection Agency, at a press conference explaining the public shouldn't be concerned about budget cuts at EPA, that shrinkage at EPA was appropriate because the environment was already improving, the apparatus was improving, and the job was basically over. I think Dr. Hernandez couldn't be more mistaken, and egregiously so. He seems to have forgotten we have made little progress removing toxics from water. He seems to have forgotten, as the previous witness pointed out, our ground water seems to be growing worse, not better. He seems to have forgotten we have hardly begun the job of regulating hazardous air polluants; we have hardly begun the job of regulating hazardous waste; we have hardly begun the job of protecting our drinking water, as the recent GAO report states; we have hardly begun the job of reviewing the effects of toxics in consumer products. The approach that is being taken by the administration seems to be a let's-not-pay-now-let's-pay-later approach; we will save on the EPA today even if it means imposing tremendous costs on the public in the long run.

They seem to have forgotten the very basic economic theories that pan out: there are no economic incentives for industry to control pollution without a Government regulation. There are no economic incentives to industry to conduct research on the hazards of pollution.

I would like to focus on three areas that are particularly important. I don't mean by focusing on these three areas to ignore the many other areas in EPA, but there isn't time to review the budget piece by piece, and I know your staff has begun that task anyway.

ENFORCEMENT PROGRAM

The first, and in many ways I think the most important, is the enforcement program. The enforcement program is a part of the program that will remain important even when EPA has completed its regulatory tasks. Enforcement is the heart of any system of laws. Without enforcement there can be little hope there will be consistency. Without strict enforcement, voluntary compliance will be the rule, which is cheaper for industry and Government to attain.

The important question is, What is the public perception of enforcement? Do people believe the laws will be enforced or not? Looking at the EPA's record for the past year, one can hardly help but suspect that they believe the laws will not be enforced. The number of enforcement cases referred for prosecution has declined by 75 percent. The number of inspections, the number of compliance orders, the number of violations found, every other indicia of enforcement activity has declined. Although we have had some difficulty getting statistics out of EPA, in talking to enforcement attorneys in every region, I am convinced that that is the case, and there has not yet been any turnaround. That sends a strong signal to those subject to those laws, just as it would if a prosecuting attorney were to stop enforcing the laws against burglary, just as it would if we stopped enforcing drunk driving laws and started giving suspended sentences. We accept in other areas of law enforcement, and we should accept it here.

What is held in the future for enforcement? It is very difficult to tell exactly what the budget means for enforcement because there have been so many reorganizations, and still another seems to be underway. It is no longer possible to segregate enforcement funds, find out exactly which attorneys and inspectors and staff members are covered. But, as I mentioned in my written testimony, internal memoranda which we have obtained copies of indicate that, at least as of several months ago, the

Administrator was informed that her fiscal 1983 budget would involve massive cuts in enforcement staff, cuts on the order of 40 percent. Indeed, the enforcement staff already suffers the problem that her present budget has not allowed for the hiring of support staff for the enforcement attorneys.

ENFORCEMENT PROGRAM STAFF

Senator LEAHY. She announced just recently her intention to increase enforcement efforts. What you are saying, as I understand it, is that the Agency doesn't have the staff it needs to increase its enforcement efforts. It might be safe to say they don't have the staff to maintain what the Congress has mandated as an enforcement program.

Mr. LASH. I think that is correct and proven by the evidence of the past year. They have not maintained the enforcement effort required by the Congress, and I would submit one example, Senator.

Immediately after the Administrator announced her intention to increase enforcement efforts, the Regional Administrator for Denver, Steve Durham, returned and, finding he did not have adequate inspectors because of the previous cuts, he had to reprogram a number of enforcement attorneys to do jobs as inspectors. The enforcement attorneys don't have technical training and were disturbed they couldn't do the job properly and filed suit to block the change. Their union is now in negotiation with the Regional Administrator after the district court made it clear it would not permit, as the judge said, soft-body attorneys to go into the field to deal with hazardous chemicals.

CONCERN WITH ENVIRONMENT

Senator LEAHY. It is interesting to hear some of the testimony we have received before this committee from EPA saying, in effect, that we can make these cuts because all our environmental matters are under control, and so on and so forth. I would be very happy to have some of them come up to the State of Vermont. As you know, we are a State that has been in the forefront in good environmental legislation for years, legislation, incidentally, that has been put into place by strong bipartisan effort. I think, in fact, the least partisan issue in Vermont—certainly in the 21 years that I have been old enough to vote back there—has been the issue of the environment. And I know I hear from everybody when I go back home, whether I am in Burlington or any other place in the State is concern about what is happening, concern—concern about how vulnerable we have become in a State with half a million people when the national effort is completely diminished and it is being left to a handful of very progressive States to handle environmental matters, usually without the resources that are available only from the national level.

I think your testimony is an outstanding summary of the problems in this budget. And quite frankly, I feel and I have stated over and over again—and I don't feel I have been proven wrong by EPA—I feel this becomes a backdoor way of repealing good environmental legislation that has been passed over the past couple of decades with bipartisan majorities. Now I won't get into a debate with EPA whether that is an intentional policy on the part of the administration to repeal those laws or not, but it is a de facto one. I do not know whether people at EPA intentionally want to repeal our environmental laws. I know it is something that this Congress would never do, nor any recent Congress.

Your example of the drunk driving laws or other criminal laws is a perfect one. It is almost the same as saying we will have laws against burglary in a particular high-crime area but we will not allow people to put locks on their doors and we will have no police available. You can pass the toughest antiburglary laws in the world and they will do absolutely no good.

IMPACT OF FISCAL YEAR 1983 BUDGET ON ENVIRONMENTAL LAW CASES

I have one more question. Your organization, the Natural Resources Defense Council, has been an extremely effective litigator in the whole environmental area. Do you believe the policy represented by this 1983 budget means more litigation or more cooperation?

Mr. LASH. Well, they already have meant more litigation from our side. I could just list a few of the cases we have filed in recent months. We have been forced to file an action challenging the redefinition of the word "source" under the Clean Air Act regulations. That case was argued before the U.S. Court of Appeals last week. We filed an action challenging the suspension of the pretreatment regulation under the Clean Water Act. There are several others under the Clean Air Act. We may soon file actions relating to false stacks under the Clean Air Act. We may soon file an action relating to the failure to take action under section 4 of the Toxic Substances Act with respect to formaldehyde. We have filed an action with respect to the Federal Pesticide and Rodenticide Act because of the failure of the EPA to disclose required information on the health effects of pesticides. That is just a list of cases that NRDC is involved in. There are several more. If one reads the trade press, one finds almost daily a report of action in the courts. In our point of view, it is a profound waste of resources. It is expensive for us to litigate. We believe it is expensive for society to litigate, and we don't see it as a productive way to reach the best solution to regulatory problems. We have increasingly sought other avenues of problem solving in the past, but now we are being forced back to the courts because the door is closed at EPA.

I would note while EPA has been cutting the number of offensive attorneys, the number of attorneys who go out and file suit against polluters who fail to comply with the law, they have been increasing their defensive resource because they too clearly perceive their policy will result in increased litigation.

Senator LEAHY. Thank you very much. I appreciate your being here.

Mr. LASH. Thank you, Senator.

Senator LEAHY. I am going to recess for 5 minutes.

[A brief recess was taken.]

[The statement follows:]

STATEMENT OF JCNATHAN LASH ON BEHALF OF THE NATURAL RESOURCES DEFENSE COUNCIL, THE SIERRA CLUB, AND FRIENDS OF THE EARTH

Mr. Chairman, my name is Jonathan Lash. I am a Staff Attorney with the Natural Resources Defense Council. I am testifying today on behalf of NRDC, Sierra Club, and Friends of the Earth.

The reasons for a strong and effective Environmental Protection Agency are summarized in an old and simple aphorism: an ounce of prevention is worth a pound of cure.

Pollution causes illness and deaths that are tragic, costly, and unnecessary. A recent study by two leading cancer researchers concluded that ten to twenty percent of lung cancer is attributable to air pollution. Toxic chemicals in our environment are linked to cancer, birth defects, and a long list of chronic diseases.

Pollution causes property damage and crop losses, destroys fisheries, ruins recreational areas, and injures wilderness and wildlife. Toxic chemicals are polluting underground aquifers; wells are being destroyed. Ozone, according to a government study, causes massive crop losses. Acid rain is killing lakes and injuring forests and property.

No one can give you a precise dollar figure for the damage caused to air, land, water, and human life by pollution. That is so both because the data is difficult to collect and because the values are hard to quantify. What is the value of a human life? What is the value of recreation in unspoiled areas? The difficulty of attaching a dollar value to environmental quality does not demean its importance, however. Some sense of the value that most Americans attach to environmental quality can be gleaned from the public opinion polls.

Louis Harris reported in a recent speech that Americans favor strict enforcement of te Clean Air Act by 83-14 percent and support keeping the Clean Water Act intact or strengthening it by 93-4 percent. He went on to observe:

> While the public thinks that some regulation in non-environmental areas ought to be relaxed or even abolished, they will oppose vehemently any measure that might have the effect of reversing environmental gains that have been made in the last 10 years. The American people are willing to make sacrifices in many areas to stop the miseries and ravages of unemployment and an economy that is out of joint. But they will not tolerate any reductions in environmental clean-up efforts -- and will regard such cuts as threatening the very quality of life in these last decades of the twentieth century.

This public support reflects the American public's very pragmatic understanding that pollution causes them injury, and that the environmental laws are the only effective preventive measure available.

The Environmental Protection Agency is the vehicle the Congress has created to prevent pollution in the United States. Cuts in EPA programs will result in increases in costs directly imposed on Americans by environmental degradation. We will pay in the currency of disease, death, and destruction of natural resources.

Pollution control will not happen without governmental action. The natural incentives of the free market run exactly the other way. They discourage expenditures for pollution control and reward those who use our air, land, and water as free sewers. As then Professor Murray Wiedenbaum wrote:

> ... persons living along a river dowstream from a polluting factory may have to endure poor water quality when the factory dumps wastes into the river. The Environmental Protection Agency, however, has the regulatory power to enforce the use of less polluting waste disposal systems, thus lessening the involuntary burden placed on the factory's neighbors.
>
> In the absence of governmental intervention, voluntary action to deal with such problems may place a firm under a competitive disadvantage. The specific company attempting to correct a situation such as the one just described would tend to bear the full costs, while the benefits of the improvement would be widely dispersed in the society. "Free riders," or firms which do not make the expensive changes, may nevertheless share in the benefit. An example of this situation is provided by the regulation of pollution standards in the

motor vehicle area. The basic justification given by government for setting such standards was clearly stated by a senior executive of a major automotive manufacturer:

> ... a large part of the public will not voluntarily spend extra money to install emission control systems which will help clean the air. Any manufacturer who installs and charges for such equipment while his competition doesn't soon finds he is losing sales and customers. In cases like this, a government standard requiring everyone to have such equipment is the only way to protect both the public and the manufacturer.*

Seeking to reduce the federal deficit by cutting environmental prevention at EPA creates another and larger deficit, an environmental deficit that will require an expensive cure.

The EPA Administrator continues to claim that her budget cuts can be implemented without detriment to the Agency's ability to carry out its duties under law. That claim is demonstrably wrong. In my testimony today, I will review the effects of the cuts already made and those proposed for FY 1983 in four areas: enforcement, state grants, research and development, and toxic substances. I will conclude with recommendations for specific increases in the Administrator's proposed budget for FY 1983.

Enforcement

Enforcement is the driving force of any system of laws. If there is reason to have a law, there is reason to enforce it. If those subject to a law believe that it will not be enforced against them, they will generally disregard it.

The EPA enforcement record over the past year has been dreadful. During Fiscal Year 1979, 251 cases were referred to the Department of Justice by EPA. During FY 1980, 196 cases were referred. For the first half of FY 1982, the number fell to twenty. From interviewing regional and headquarters staff, it is clear that the entire range of indicators of enforcement activities is down -- inspections, notices of violation, penalties, compliance orders. The Administrator brushes this record aside, calling it bean counting, but it is the record by which the public and the industry must judge EPA's intentions.

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*/ Weidenbaum, Business, Government and the Public at 12-13 (footnote omitted).

Administrator Gorsuch has also asserted that her Fiscal 1983 budget proposal will not significantly affect enforcement resources. This assertion is difficult to assess because of repeated reorganizations of enforcement functions carried out in the past year, and the elimination of the separate enforcement program. Internal memoranda that we have obtained reveal that the Administrator's Fiscal 1983 budget will sharply cut enforcement resources (while leaving the defensive resources of the Office of Legal Counsel intact).

In a memorandum dated February 17, 1982, then chief of enforcement William A. Sullivan advised EPA chief of staff John Daniel that the Fiscal 1983 budget left him 64 positions short of the 157 full-time positions allocated for 1982 for Headquarters enforcement staff after the reorganization of enforcement. A subsequent memorandum from EPA Comptroller Morgan Kinghorn to the Administrator circulated as a "draft" on April 9, 1982, confirms Sullivan's analysis and points out that the situation is still worse in the EPA regional offices where the Administrator's Fy 1983 budget proposal allocates 148.7 enforcement positions to the Regions where the present enforcement staff is 262.2, a 43% cut. Kinghorn observes that the transfer of positions from program offices to cover the enforcement shortfall "would severely impact the program offices," which have already lost substantial resources, leading him to doubt that the affected offices would "remain at all viable."

Thus, those who manage EPA are quite aware that they have made massive cuts in the enforcement staff for FY 1983, and cannot rob other offices further without destroying them as well. Clearly the budget proposal must be changed, or enforcement attorneys will be fired.

This situation is exacerbated by several additional factors. First, when the enforcement attorneys were transferred into the Office of Legal and Enforcement Counsel last December, no support staff was transferred with them, and the personnel ceilings imposed on OLEC prevent the hiring of support staff. A March 19, 1982, memorandum from the managers of the hazardous waste enforcement program complains of a "critical" shortage of support staff explaining, that 35 attorneys and 2 legal interns are served by 3 secretaries and 5 clerk-typists. They have no managers or bookkeepers and are desperately short of work processing equipment. This situation represents extraordinarily poor management.

Finally, the situation will be exacerbated when and if EPA fulfills its often delayed promise to hire 25 hazardous waste investigators, for those positions too must be covered by the already inadequate number of slots assigned to the Headquarters enforcement staff.

Both Mrs. Gorsuch and Mr. Perry, the General Counsel, have said enforcement is not being cut, or at least not more than the Agency as a whole. However, the figures that have been cited by Mr. Perry include the entire Office of Legal and Enforcement Counsel. Within OLEC, the cuts are not evenly distributed. Defensive resources, those used, for example, when the Agency issued for illegally changing a regulation, have increased slightly, while actual enforcement resources have been cut sharply.

The message is clear. Enforcement actions are down and enforcement resources are down. Those that remain are poorly managed. Recently Mrs. Gorsuch announced a new policy of increased enforcement. The response of the Denver Regional Administrator is instructive. In order to generate cases, he needs inspectors, but previous cuts and reorganizations have reduced his technical field personnel. His solution is to retrain enforcement attorneys to be inspectors, an activity for which they believe they are ill prepared. Of course, once the Region ends the year-long hiatus and begins to develop enforcement actions, there will be a critical shortage of attorneys to handle the case.

State Grants - EPA's False Federalism

EPA administers a set of statutes that establish a unique federal-state relationship. Indeed, the Clean Air and Clean Water laws written by Congress a decade ago were viewed as significant experiments in federalism. Subsequent environmental legislation generally has built upon the structure of federalism developed in the Clean Air and Clean Water Act. The relationship between EPA and the states has developed slowly -- sometimes with great acrimony.* But in some cases it has begun to work well.

Recent changes in EPA policy, however, and proposed cuts in the Agency's budget threaten to turn the cooperative federalism of the environmental statutes into a shelter for a federal evasion of responsibility.

Why Federal Standards?

The federal environmental statutes direct EPA to set a variety of national pollution control, safety, and health standards and then, in many cases, authorize the states to set up programs to implement those standards. Early environmental statutes had sought through exhortation and financial assistance to elicit state action to control pollution. The results were disappointing. Public pressure for federal action increased, and, in the words of the Supreme Court, "Congress reacted by taking a stick to the States in the form of the Clean Air Act Amendments of 1970 . . ."**

Congress wrote legislation that mandated relatively specific uniform federal pollution control requirements, not only out of frustration with state inaction. The environmental legislation of the 1970s reflected Congress's determination that pollution control is fundamentally a national concern. As the House Commerce

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*/ See, Stewart, Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy, 86 Yale L. J. 1196 (1977).

**/ Train v. Natural Resources Defense Council, 421 U.S. 60, 62 (1977).

Committee observed in its report on the 1977 Clean Air Amendments:

> Those states which desire to retain clean air will have little hope of maintaining superior air quality without such national guidelines because:
>
> (a) pollutants from other areas will be carried into clean air States;
>
> (b) industry will pressure clean air States to relax their standards with the threat of industrial relocation in other, more permissive States.*

In addition to concern that pollution does not stop at state boundaries, and that economic forces exert pressure on all states to conform to the lowest common demoninator, Congress sought to avoid the creation of a maze of inconsistent local standards. The federal laws establish a regime of predictable and consistent national standards.

The Role of the States: Implementation

Within the context of national standards expressing national policy, the environmental statutes recognize and accommodate local diversity. The Clean Air and Clean Water Acts place primary reliance on the states to implement critical statutory provisions. While they must assure compliance with national standards, the states may develop their own programs to do so. Once such programs are in place, the states make the case-by-case decisions on permit applications.

The Role of EPA: Assistance

The development and implementation of pollution control standards involves technical problems of great complexity, including: the collection and analysis of baseline data on pollution levels and sources; assessment of the human and ecological effects of different pollutants; evaluation of the cost and effectiveness of pollution control technology; definition of performance and technological standards. Individual states do not have the resources to carry out these functions, and indeed it would be appallingly wasteful for

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*/ Report of the Committee on Interstate and Foreign Commerce to accompany H.R. 6161, H.Rep. 95-294, at 136, 95th Cong., 1st Sess. (1977). *Also see* S.Rep. 92-414, 92nd Cong., 2d Sess. (1971).

50 different states independently to undertake the bulk of the technical tasks required for the implementation of environmental standards. In the past, EPA has taken responsibility for both basic research and resolution of technical issues associated with standards or permitting. It should continue to do so.

In addition, EPA has in the past provided substantial direct assistance to state environmental quality programs. Since the states have been asked to implement federal policy, that assistance is critically important. It is not a subsidy but a payment for a vital service. It also represents the carrot that goes with the "stick" that the Supreme Court described Congress as having taken to the states.

The Role of EPA: Oversight

Federal standards mean little, of course, unless they are enforced, and Congress was quite explicit in directing EPA to ensure that states met federal requirements or, when the states failed to do so, to implement those requirements directly.* Thus EPA must set standards for state compliance, monitor state activities, and, upon failure of the states, exercise its own authority with diligence and consistency.

Administration Claims

In her testimony before the Senate Environment and Public Works Committee several days ago, Mrs. Gorsuch said:

> Once a regulatory program matures, with greater and greater State participation, the resources needed by this Agency should indeed diminish. Such a comparative reduction in Federal funds should not and does not signal a diminution of Federal commitment.
>
> The high levels of initial investment in our programs over the past five and six years are attributable to your deep concern and to the concern of the American people and reflect the Nation's long-standing commitment to environmental goals. Because I share these concerns, I intend to keep that commitment, and to do so in a way that builds on our past investments, while bringing in greater State involvement wherever possible.**

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*/ §§110(c), 113, 42 U.S.C. §§7410(c), 7413 (Clean Air Act); Clean Water Act §402(c)(3).

**/ Statement of Anne McGill Gorsuch, Administrator, U.S. EPA, before the Committee on Environment and Public Works, United States Senate, February 23, 1982.

Contradictory Reality

The reality is that there has been a diminution of federal commitment. This diminution translates directly into a decrease in environmental protection.

Senate testimony by the State and Territorial Air Pollution Program Administrators (STAPPA) is particularly revealing.

"When faced with constant funding levels over the past two years, states still suffered from inflation - 90% of the states had to cut back on their air quality monitoring efforts and over half had to reduce enforcement and source surveillance. There have been extended delays in permit reviews and an inability to establish effective toxic air pollution control programs."**

The National Commission on Air Quality (whose recommendations are cited often by the Administration) stated last year "State and local agencies appear to be ill-equipped to accept substantial additional responsibilities without additional financial resources and personnel." The Commission recommended that the Clean Air Act authorize increased funding and that "the administration and Congressional appropriations committees provided the needed funds."

As STAPPA points out the Administration supports regulatory reform initiatives such as the EPA bubble policy designed to reduce regulatory costs to industry. However, such control programs tend to be the most resource intensive control programs to administer, since they require extensive discussions between the control agency and source owner to determine the most reasonable and effective control option. Moreover, increased monitoring of compliance status will be required under such individualized programs.

State plans to demonstrate attainment and maintenance of the lead NAAQS are woefully behind schedule. Implementation of this toxic pollutant program will require additional funding. Yet the analysis of the Congressional Budget Office notes that the shift of program responsibilities to the states is accompanied by a 26% reduction (in real terms) in EPA grants to State control agencies.

**/ Statement of Kenneth A. Flagg, Director, Massachusetts Division of Air Quality Control on behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) before the Committee on Environment and Public Works United States Senate, February 23, 1982.

Why the States Need A Strong Partner In EPA

A representative of the National Governors Association and the state of Florida illustrated the impact of EPA budget cuts at the State level.*

Florida has accepted full or partial delegation in the drinking water and air quality program, working to comply with EPA requirements to secure delegation. It was necessary for the Department of Environmental Regulation to convince the legislation that it should seek delegation.

"In our arguments to the legislature, the federal program grant monies have been a big selling point. The business leaders in Florida have also supported us in these efforts, along with environmentalists, to reduce duplicative governmental permitting and to gain greater control of our states environmental destiny.

But with these groups too, the most persuasive argument for seeking delegation has been the federal grants, lessening the need to drain state general revenue monies.

Reductions in the federal program grants at this time could erode or eliminate this base of support we have built with our legislature, businesses, and environmentalists. Not only might it impede our efforts to gain future delegations, but it could very well lead, to a call for us to turn back those we have to to the federal government."

A very practical reason exists for EPA to remain strong in its ability to assume jurisdiction over programs it has delegated to states. Without it, states will face pressures from regulated interests to weaken standards; or their enforcement. With it, these interests can be allies of the state. They'd rather work with a state than with a distant federal agency.

Florida's situation is not unique. The National Governors Association points out that there is serious question whether other states have the fiscal capacity, given current economic difficulties, to offset proposed reductions in federal support.

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*/ Statement of Victoria J. Tschinkel, Secretary, Florida Department of Environmental Regulation on behalf of the National Governor's Association and the State of Florida, before the Committee on Environment and Public Works United States Senate, February 26, 1982.

For example, Washington State is facing a $500 million budget defecit by October, with no prospect of its legislature increasing current spending levels. Proposed federal cuts would impede efforts to control hazardous waste discharges into Commencement Bay near Takoma, due to staff reductions in the NPDES permit program.

Rhode Island officials report that state funding for environment programs has been reduced by 10 percent. Additional federal cuts will result in reduced monitoring of municipal and industrial discharges, stream quality, and public drinking supplies. General concern is expressed that reduced monitoring will undermine enforcement credibility.

New Jersey reports similar concerns, with no expectations of state funding to replace proposed reduction in federal support.

Alabama officials indicate that its legislature is considering a 44 percent reduction in state funds for air, water, and hazardous waste programs.

Concern about the impact of EPA reductions in State grants exists at the local level as well. A statement on behalf of the National League of Cities portrays the effect of cuts on the hazardous waste program.*

"When grants to the states for solid waste planning were eliminated last year, no state plan had been approved by EPA, and the open dump inventory mandated by RCRA was not complete. According to the GAO, the open dump inventory, finally published by EPA in May 1981, is incomplete and will not fulfill the purpose for which it was intended by Congress. The published inventory listed only 1,209 open dumps in the Nation. States are aware of thousands of other open dumps - it is estimated that Louisiana alone has over 1700 - but without federal funding it is unlikely that states will continue to update the list."

Although 38 states have now submitted solid waste plans to EPA for approval, as of a week ago, only 8 plans had been approved. Even if EPA continues to review these plans, surveys show that states will likely be unable to implement them. The elimination of grant funds occurred three years earlier than originally expected. User fees, which could provide an alternative funding source for state programs, are not in place in most states. Many state agencies are expressly prohibited by statuate from charging fees, and the resistance from disposer groups required to pay fees will be politically difficult to overcome. In the meantime, there will be new open dumps and existing ones will not be closed or upgraded.

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*/ Statement of Richard Waggenor, Mayor, Green River Wyoming on behalf of the National League of Cities, before the Committee on Environment and Public Works, February 26, 1982.

Reductions in grants will greatly hinder the states in their comprehensive planning ability in environmental management. An example of this was provided to the Senate, by the councillor and former mayor of Cambridge, Massachusetts.*

The eight federally funded employees working on the comprehensive water planning program will be eliminated. One of the projects these employees are working on is a comprehensive state strategy to protect groundwater. Citizens of Cambridge have recently discovered that the salt level in its reservoirs located in the suburbs is too high due to the runoff from nearby highways. The state capacity to deal with problems like these has been eliminated. In the past this division also provided the technical assistance necessary so that local town planning boards on the Cape, working with the Association for Cape Code, could draft ordiances dealing with the underground storage of oil and gas seeping into precious water supplies. Another program these employees are working on which will now get insufficient attention is septage management. Many haulers of sewage, since they are not near enough to good treatment plants, dump illegally in fields, contaminating large open areas and creating a public health hazard.

Survey of State Programs

Beginning in the fall of 1981, the Natural Resources Defense Council conducted an informal survey of state environmental offices in each of the fifty states. They asked about levels of funding and the capacity of the state agency to take on additional regulatory responsibilities. They received substantial data on 45 states. The response is revealing:

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*/ Statement of Francis H. Duehay, Councillor of Cambridge, Massachusetts, before the Committee on Environment and Public Works, United States Senate, February 26, 1982.

- Each of the forty-five states expects an overall reduction in resources in the coming year. Many face reduction in both EPA and state funds.
- Thirty-five of the forty-five say they cannot carry out additional responsibilities. Only one state, Louisiana, says it can carry out additional responsibilities.
- One state, Idaho, returned responsibility for its air program to EPA. Four others may do so. Sixteen other states say they may be forced to reduce compliance or enforcement of the federal law.
- Response from Delaware indicates that reductions in EPA funding in FY '83 and '84 could "force an entire reconsideration of the Federal-state partnership."
- The situation in New Jersey is typical of many of the states surveyed. "Increased State funding is highly unlikely in the environmental area because of the pressure to restore numerous other programs eliminated or severely curtailed by federal budget cuts.

These dismal statistics are totally at odds with the Administrator's rosy assertions. State offices see the rug being pulled out from under them. The effects will be real and significant. Examples can be found in the local press with disheartening regularity:

- The Missouri Department of Natural Resources reports that polluters "laugh" at efforts to enforce the state's air, water, and hazardous wastes laws because enforcement resources are so inadequate.
- The Baltimore Air Pollution Control Division is being closed down due to funding cutbacks.
- A study prepared for Congressman Tom Downey revealed that emergency testing of drinking water for contamination and air quality monitoring would be curtailed in his New York district.
- Monitoring of the effectiveness of power plant pollution controls has been halted in Illinois.

The reality behind the EPA rhetoric espousing a new Federalism is an alarming retreat from the commitment to act as a partner with the states to secure clean, heathful air, land and water.

Research

As Mrs. Gorsuch has frequently said, good research is the cornerstone of efficient regulation. Good research costs money and takes time. The Administrator's FY 1983 budget proposal decimates EPA research. Overall research would be cut 40% from 1981 levels. Extramural research would be cut 53%. Those are nominal dollar figures, but research, especially extramural research, is more vulnerable to inflation than most components of the EPA program.

The cuts involve sharp declines in epidemiological research, clinical studies, and long-term health and safety research. EPA cannot protect us from health hazards if they do not do the research to identify them.

Over 40,000 chemical products are in commerce in the United States. Six hundred to a thousand new products will come to EPA next year for premanufacture review. We have little information on what the vast majority of these products do to living organisms, how they enter our environment, how they travel through it, where they may be accumulating, or how many people are exposed to them. Congress passed the Toxic Substances Control Act in 1976 to require EPA to screen new and existing chemicals and to protect the public from those that endanger human health. The proposed FY 1983 budget would slow that process to a crawl, so that it will be decades before we even learn what is dangerous. By then it will be too late for many Americans.

Research on pollution control technology will be cut by 54%. That cut, combined with the broadly held perception that Mrs. Gorsuch will only retreat on regulatory requirements and the Administration's efforts to eliminate SBA assistance for the installation of pollution control equipment, has caused two leading firms to pull out of the pollution control business.

Monitoring will be cut. This will deprive EPA of the basic data needed to set pollution control standards, such as the inhalable particulate standard now under consideration.

The cuts in extramural research will not only slow the development of data, they will reduce the number of professionals trained in the field. Research programs built up over years are being destroyed. The productivity of in-house research has declined because of the poor management at the Agency. After over a year in office, the Administrator has yet to propose an Assistant Administrator to run the research program and has testified that she has no such plans.

Industry has no incentive to conduct the research needed to support regulation. The states do not have the resources to do so. If EPA fails to move ahead, crucial safety and health regulations will be delayed, including hazardous waste regulations, hazardous air pollution regulations, and effluent guidelines for toxic water pollutants. That is precisely what has happened during the past year.

Toxics

Industrial chemicals are pervasive in our world. There are over 40,000 chemicals produced or used in the United States. Ten to twenty new chemical compounds enter the stream of commerce every week. Manmade chemicals are a part of virtually all commercial products used today.

Many chemicals are benign, but some are extraordinarily dangerous, even in tiny quantities. Some cause cancer, birth defects, heart and lung disease, and a host of other ailments. Because the damage they do may take years, even decades, to show up in humans, people often suffer long exposure to hazardous chemicals before their effects are fully known. Vinyl chloride was widely used for many years -- despite laboratory tests showing it caused cancer in animals -- before we learned that it causes human cancer. Asbestos was used in talcum powder, wallboard, hair dryers, brake linings, and many other products for decades before epidemiological studies definitively showed it is a human carcinogen. Animal studies implicating asbestos as a carcinogen had been done much earlier.

The Toxic Substances Control Act (TSCA) was enacted in 1976 to assure that "innovation and commerce in chemical substances and mixtures do not present an unreasonable risk of injury to health or the environment." TSCA autorizes EPA to require testing of certain existing chemicals to determine whether they are hazardous; to restrict or prohibit the manufacture of chemicals that pose an unreasonable risk to human health; and to screen new chemicals to identify potential "bad actors" before, rather than after, human beings are exposed to them.

The proposed FY 1983 budget cuts back on the resources invested in three critical functions under TSCA, each of which should be increased rather than cut:

- Testing: As I explained in the previous section of my testimony, testing of new and existing chemicals has been sharply reduced. Scrutiny of premanufacture notices submitted by industry has been reduced as well.

- Test rules: TSCA requires EPA to set rules for industry to test the safety of existing chemicals that a committee of experts concludes may pose a risk of cancer or injury to health or the environment. A 1981 court order requires EPA to issue test rules or explain why testing is unnecessary for 37 priority chemicals in the next two years. Instead of moving ahead with this critical task, EPA has reduced its efforts to comply, seeking to negotiate voluntary agreements with industry.

- Asbestos: EPA has cut back on efforts to identify and seek action on schools in which building materials expose children to the risk of cancer.

Recommendations

We do not believe the budget cuts proposed by the Administrator are consistent with the country's desire to be protected from pollution. The cuts are certainly false economies that impose far larger costs on the American people. We urge the Committee to make at least the following increases in the EPA budget:

State Grants - $150 million

Of this total, we recommend that $50 million be specifically earmarked for an incentive program to encourage state enforcement. The remaining $100 million would bring existing state grant programs back to historic levels, although it would not provide for program expansion.

Research & Development - $175 million

This would permit a return to 1981 levels of effort (with a small inflation factor). We recommend, in light of the management problems at EPA, that the bulk of these funds be earmarked for extramural research.

Enforcement - $75 million

This would permit the Agency to rebuild a viable enforcement program capable of developing strong cases.

Superfund - $100 million

EPA proposes to allocate $230 million to begin cleanup of

114 high priority hazardous waste dump sites. The amount is not enough to do the job.

The Superfund legislation requires EPA to clean up at least 400 sites between 1981 and 1986. The cost of cleaning up just one such site -- Love Canal -- will run over $20 million. This includes digging up the wastes, hauling them away to a safe disposal site, installing a tile system to drain the area, piping the effluent to treatment, placing a protective "curtain" around the area, and capping the site to prevent additional drainage. It does not include the cost of purchasing houses in the surrounding area, relocating residents, or health costs.

In addition, the cost of simply diagnosing a site to determine if it presents a threat to groundwater or human health, and the cost of containing the site through placement of a fence or other protective net around it amount to at least $750,000 per site. Finally, EPA needs more people to assist states in identifying and monitoring additional sites.

Money to clean up hazardous waste dumps is appropriated from the Superfund Trust Fund. The fund is supported partly by a tax on industries that generate hazardous wastes and jointly by a federal contribution. The Reagan Administration budget analysis indicates that, even if its $230 million request for Superfund activities is appropriated, the Superfund Trust Fund will still contain a surplus of over $350 million at the end of FY 1983. Thus, enough money is available to pay for immediately needed diagnosis, containment, cleanup, and monitoring activities. We recommend that the Superfund budget authority and outlays be raised by $100 million in FY 1983.

Toxics - $75 million

This would increase the toxics budget, exclusive of state grants and enforcement, modestly over 1981 levels. It would still be far below what is necessary to move expeditiously to comply with TSCA.

These recommendations would add $575 million for five programs. The increases are by no means sufficient to enable EPA to do the job assigned to it, but we believe they are a realistic beginning.

STATEMENT OF WILLIAM EICHBAUM, DEPUTY SECRETARY, MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE, ON BEHALF OF THE NATIONAL GOVERNORS' ASSOCIATION

Senator LEAHY. Mr. Eichbaum, as you probably know, we moved somewhat out of order, and I am glad to have you here. I notice you are here on behalf of the National Governors' Association, but I am sure that will not close your mind to your experience as the deputy secretary of the Department of Health and Mental Hygiene in Maryland.

We will put your whole testimony in the record. Feel free to summarize any way you want. But I would like you to answer, as you testify, a couple of questions. First, if State grants are cut back out of this budget, will the difference be made up by the States? Another question, is there really fat in the State environmental protection budgets? You can wear either your National Governors' hat or your State of Maryland hat to answer those questions.

EPA FISCAL YEAR 1893 BUDGET CONCERNS

Mr. EICHBAUM. Thank you very much, Senator Leahy. I feel quite comfortably wearing both hats in attempting to address the budget issues concerning EPA this morning.

I might, by way of background, indicate I served for 12 years in environmental control programs with the State of Maryland, with the State of Pennsylvania, and for a brief stint with the Department of the Interior, and have dealt with the varying postures of the budget issues during that period of time.

Senator LEAHY. I might say, incidentally, Benson Scotch, who as you know is from the Vermont Attorney General's Office and is on leave to my office now for a period of time, a fellow Vermonter, speaks very highly of the work that you have done in the past. So apparently the two of you have worked together and have had occasion to be at various attorneys general meetings in the past.

Mr. EICHBAUM. That is right, Senator. We go back. I guess my fondest memories of Benson are his renditions of Gilbert and Sullivan on the ukulele.

Senator LEAHY. That has even crept into a couple of our legislative meetings on a couple of occasions here.

Mr. EICHBAUM. I am here on behalf of the NGA and also the State and Territorial Air Pollution Program Administrators, the Association of State and Interstate Water Pollution Control Administrators, and the Association of State and Territorial Solid Waste Management Officials, all of whose professionals and Governors strongly recommend that fiscal year 1983 funding for EPA not be reduced below current levels. I will just summarize my written testimony.

STATE GRANTS

We are basically looking at the proposed reductions of 20 percent for most programs, except for a 16-percent reduction for State grants for hazardous waste programs. This is occurring at a time when there is widespread stringency in the budgets of virtually every State, not only because of the prospective income due to the economic situation nationally but also because in many areas we are now absorbing in 1982 Federal budget cuts not only in environmental areas but in other areas, as you are aware. Most States have had to raise taxes or make cutbacks in government programs, and to fashion this further reduction in fiscal year 1983 in light of that is very difficult.

I think we have to look a little bit at the philosophical background as we consider the budget issue. I think it is important to recognize that a partnership has evolved in the last decade between EPA and the States, and one of the conditions of that partnership has been Federal support for the States to develop and implement plans created at the Federal level for carrying out Federal programs. Without the Federal financial support, States would have adopted widely varying approaches, many different standards—and that is not necessarily bad—but one of the things we have tried to do over the decade is create a national program of environmental protection and public health protection administered through the States, and the Federal funding has been an important part of that. We are concerned that, without continued funding, States will turn programs back, they will not be able to fully implement programs, and a reduction, in fact, in State effort in implementation of environmental protection programs will occur in many, many States.

In terms of your questions, let me try and turn to that. If there is this cut, you have asked, will the difference be able to be made up by the States? As I have suggested, other budget reductions, the fiscal situation as we look at the future seems to me to make that fairly problematical. The National Governors' Association has done a survey of virtually every State and has asked that question, and the answer has been in the preponderance of States that they, in fact, will not be able to make up the difference.

I might at this point in time, Senator, introduce Tom Curtis, who is the associate staff director of NGS on their committee on energy and the environment and who was responsible for the preparation of that survey and collating the results and can answer any details you have about that.

PAPERWORK REDUCTIONS

Senator LEAHY. Mr. Curtis, glad to have you here.

One of the things the administration says is their cuts in the paperwork was going to enable the State to do their job in spite of a large cut in State grants. My own view is that that is Pollyannish at best; misleading at worst.

Mr. EICHBAUM. I agree with you; I think it is misleading. One of the things that has occurred over the last 4 to 5 years—and I realized this when I left the State of Pennsylvania in 1977, went to the Federal Government, and about a year and a half ago returned to Maryland—I think there has been a significant streamlining of the paperwork flow and the paperwork requirements that exist between EPA and the States. I am astounded, in fact, at the ease, if you will, now in the relationship in the day-to-day administrative sense between the State and EPA, and

I am certain that you are not going to find 20 percent in a paperwork reduction. EPA has also suggested that the possibility of permit fees at the State level could help make up that reduction, and there is some truth to that, although again that question was asked in the survey and certainly the current situation does not bear out that user fees could make up the difference, and certainly that would have to be done over a long period of time, going through every State legislature, and would not occur in 1983.

STATES' BUDGETS

I think another thing in terms of the fat question which very quickly relates to this, you also have to look at the history of what has happened in the States. We have been dealing in most States with tighter budgets over the last at least 5 years, various State initiatives to reduce the tax base. The problems of inflation have all produced a very squeezing situation with respect to budgets we have in State programs, and it is my view that we are at the bone. We have been at the bone for some time and there is not fat. One way of recognizing that, it seems to me, is that—at least in Maryland, and I believe it is true in most agencies—somewhere between 75 and 90 percent of the budget goes for salaries. We aren't maintaining extensive buildings; we aren't doing tremendous amounts of research. We do not have vast fleets of automobiles that are just running all over, although we have some of that. Seventy-five to ninety percent of the budget goes to salaries. Most States are not paying a competitive salary even for the skills that we are hiring when we compete against either the Federal Government or the private sector. A recent survey in Maryland suggests we are about 25 percent below competition, and one of the reasons we aren't going up is we don't have the money. So we really are I think at the bone when you look at it that way. What it means is, if you are going to have a 25-percent reduction, you are going to have a real reduction in programs at the State level.

One of the things that has happened with this reduction over the last 5 years, and you may have seen this elsewhere in government, normally what we try to do is skim the first one percent reduction off the top, across the board from program to program. So you might up your vacancy rate a little bit or slow down the ability to create new positions across the agency. We have done that now in virtually every State, and what we are looking at now with further reductions is eliminating programs. We are no longer going to just cut back the whole effort, we will take in the area. We might take our stack monitoring team and say we can't afford that $80,000, we are going to eliminate it.

Senator LEAHY. Would you say this is probably typical of most States, that is, the States are not going to go and fill these gaps?

Mr. EICHBAUM. I think the States will find it difficult to do that, and I believe the survey results point that out.

Senator LEAHY. I just note for the record that I wrote to the chairman of the National Governors' Association, Governor Snellling of Vermont, for the study in January, and we will put a copy of my letter, which I will provide for the record at this point, and when we receive a response from Governor Snelling, both his response and a copy of the study will also be included in the record. at this point in time.

[The communications follow:]

LETTER FROM SENATOR PATRICK J. LEAHY

JANUARY 15, 1982.

Hon. RICHARD SNELLING,
Chairman, National Governors Association,
Washington, D.C. 20001.

DEAR GOVERNOR SNELLING: As a member of the Appropriations subcommittee responsible for the Environmental Protection Agency's budget, I have been very concerned that the 1983 budget may cut the Agency so severely that it will not be able to perform its legal mandates. The proposed 1983 budget, if adopted, will cut the Agency's budget by 40 percent and reduce the staff by 25 percent.

Almost every major piece of environmental legislation we have passed has been based on a State-Federal partnership. All the reports of the 1983 budget indicate that there will be major cuts in the State grants programs.

Would it be possible for the National Governors Association to poll its membership to determine what the effect of the 1983 cuts will be on State-related programs? This information will be critical to the Appropriations committees as they consider the Environmental Protection Agency's budget.

With best wishes for the new year.

Sincerely,

PATRICK J. LEAHY,
U.S. Senator.

Letters From Hon. Richard A. Snelling, Governor of Vermont, and Chairman, National Governors' Association

January 29, 1982

The Honorable Patrick J. Leahy
United States Senate
Washington, D. C. 20510

Dear Senator Leahy:

Thank you for your recent letter regarding the possible effects of cuts in the Environmental Protection Agency's budget on the federal-state partnership in environmental protection. The Governors share your concern that federal budget cuts must not adversely affect our ability to carry out statutory mandates in the protection of public health and environmental quality.

In order to determine the effect of proposed budget cuts on EPA's state-related programs, the National Governors' Association has already undertaken a survey of states. We expect to have the results of this effort in final form in the next six to eight weeks and will be pleased to share our findings with you. The survey is being developed by the NGA Energy and Environment Committee. The staff director of the Committee is Ned Helme, and he can be reached at (202) 624-5370 if you wish to speak with him directly.

We very much appreciate your interest in this matter and look forward to working with you and the Appropriations Subcommittee.

Sincerely,

Richard A. Snelling

Governor Richard A. Snelling

May 20, 1982

The Honorable Patrick J. Leahy
United States Senate
Washington, D. C. 20510

Dear Senator Leahy:

In response to your recent letter regarding the possible effects of cuts in the Environmental Protection Agency's budget on the state-federal partnership in environmental protection, I am forwarding a report recently prepared by the National Governors' Association on the states' management of environmental programs. The report reflects the Governors' concerns that federal budget reductions must not adversely affect our ability to carry out statutory mandates in the protection of public health and environmental quality. As you know, the states have indicated a desire to assume more environmental program responsibilities in partnership with the federal government, but the proposed reduction in federal support comes at a time of severe financial pressures in most states.

As you will note, the NGA report suggests a strong possibility that many states will return delegated activities to the federal government, will not accept delegation of additional responsibilities, or will curtail certain environmental protection activities if federal management assistance is reduced.

We very much appreciate your interest in this matter and look forward to working with you and the Appropriations Subcommittee to secure level funding for EPA programs in FY 1983.

Sincerely,

Richard A. Snelling

Governor Richard A. Snelling

Senator **Leahy**. I appreciate the testimony. I also appreciate the fact we now have that study because it bears out what I heard from Governors who have talked to us or State administrators who have talked to us on this subject. I think it also just bears out what I said over and over again in this committee, that we are dealing with a national issue, not a State-by-State issue. I don't think that Maryland's adjoining neighbors should feel that the protection of their environment from any onslaught from Maryland should have to be contingent solely on Maryland, any more than Maryland should have to feel protection of their environment should be solely up to the whims of States that might lie within the prevailing wind or water patterns or anything else of Maryland. I appreciate your testimony here today very much.

Mr. **Eichbaum**. I think that is right, Senator. I think one of the reasons that historically the States have supported a strong Federal program is the notion that it would bring about some consistency and equity amongst the States so you wouldn't have economic trading, you wouldn't have varying threats to the public health. That would, of course, disappear as State programs became totally a function of State resources.

Senator **Leahy**. In fact, many States could be placed at a severe economic disadvantage with other States.

Mr. **Eichbaum**. That is right. I might note I think Maryland is a State that has been in a pretty good fiscal position over the last few years and probably looks better than many other States, but we see for the first time in some time the impacts in recession and tax revenues and competing for other programs even in Maryland. So we are on the positive side of what I suspect on the survey is a bleaker picture.

EPA'S RESEARCH AND DEVELOPMENT PROGRAMS

Let me in closing make one other point which is a somewhat more indirect one, and that has to do with other aspects of the EPA budget. I particularly don't want to lose sight of the need to support parts of the EPA budget which don't come to the States but which produce results and products and information which are extremely valuable to the States, and I particularly in this regard want to focus on the EPA research and development budget which, as I understand the proposal for fiscal year 1983, is substantially reduced. It is my view that it is a peculiarly important function of the Federal Government to do the kind of in-depth scientific investigation that is necessary to insure that the standards and the technologies that we are applying through State enforcement and permitting and the rest of it makes sense and, where appropriate, having national consistency and a national validity. And I find it disturbing in a period when even the Heritage Foundation report on EPA commented a major need at EPA was to assure the standards were well based that that budget is undergoing a severe cut. I think it is very unfortunate that what is at the base of a commitment to the future, which is scientific research and understanding about the condition of our health and our environment, to see the Federal Government cutting in this area, which is a basic investment in that future and which the States simply cannot replace. We do not have the resources. It would be stupid for us to try to do it and develop 50 different research projects.

Thank you very much. If you have further questions, I will be happy to address them.

Senator LEAHY. No; I think the three or four questions I asked at the beginning have been answered in your testimony. I appreciate it very much. Thank you.

Mr. EICHBAUM. Thank you.

[The statement follows:]

STATEMENT OF WILLIAM M. EICHBAUM, ASSISTANT SECRETARY FOR ENVIRONMENTAL PROGRAMS, MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Mr. Chairman, Members of the Committee, thank you for the opportunity to appear before you this morning. My name is Bill Eichbaum and I am assistant Secretary for Environmental Programs in the Maryland Department of Health and Mental Hygiene. I am pleased to be here today on behalf of the National Governors' Association, at the request of Governor Jay Rockefeller, chairman of the NGA Energy and Environment Committee. I am also speaking on behalf of the State and Territorial Air Pollution Program Administrators (STAPPA), the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and the Association of State and Territorial Solid Waste Management Officials (ASTWMO). The Governors and these pollution control professionals are united in their strong recommendation that fiscal year 1982 funding for the Environmental Protection Agency not be reduced below current levels.

As I know you are aware, the Administration has proposed a 20% reduction in federal support for the management of the air quality, water quality, and drinking water programs, and a 16% reduction in funds for the management of hazardous waste programs. Although the states have indicated a willingness to assume greater responsibilities for environmental program management, these reductions are proposed at a time of virtually unprecedented budget stringency in most states. Most state budgets now reflect both last year's federal budget cuts and the continuing recession. At least two thirds of the states are experiencing revenue shortfalls from earlier projections, and virtually every state legislature meeting this year has had to raise taxes and/or make significant cutbacks in government programs and services. This situation greatly increases the difficulty states will face if federal support for managing environmental programs is reduced.

In considering the proposed reductions in federal support for environmental management programs, it is important to bear in mind the nature of the partnership that has evolved over the past decade between the states and the EPA. Under the terms of the partnership, the federal government has provided support to the states for the development and implementation of plans for carrying out federally mandated activities. Without such support, states could well adopt widely varying approaches to controlling pollution. While that is not necessarily bad, it should be remembered that federal support was justified in the first instance by the need for establishment of a national program of public health and environmental protection administered through state programs. In addition, consistency is important both to the business community, which operates in an interstate environment, and to the states themselves, which may be subject to the spectre of industrial flight if consistency breaks down.

Without adequate federal support, there is a danger that many states will not accept or will return delegation of a number of key environmental programs. Indeed, a recent survey by the National Governors' Association and the associations of pollution control professionals -- a copy of which is attached to my statement -- suggests that a significant number of states are giving serious consideration to returning or not accepting delegation of certain programs if the federal support for environmental program management is reduced. This possibility runs directly counter to the Administration's desire for more states to assume delegation of environmental programs. In addition, a significant number of states may reduce certain environmental protection activities by an amount at least proportionate to the reduction in federal support.

One fact explains the inability of the states to absorb the proposed budget reductions without having to reduce their environmental management activities. That is, that the states have already absorbed inflation related "budget cuts" in these programs, in the face of relatively flat funding over the past several years and the actual reduction in funding last year. State program managers have streamlined their programs over the past several years and really cut the "fat" out of these programs. We do not believe that management changes alone can make up for the proposed federal budget cuts. We do believe that reductions in federal support will be translated into reductions in personnel and reductions in our ability to manage environmental quality.

At the same time that the states' environmental programs would be under severe budget pressure if the Congress does not see fit to provide the EPA with level funding, the states feel a strong need to increase their efforts in certain areas. Perhaps the most notable is toxic pollutants in all environmental media, which state agencies are under intense public pressure to vigorously control. Other activities the states feel need increased efforts include the development of controlled trading systems, which can significantly reduce compliance costs for the regulated community but which increase the cost to regulatory agencies; the development of groundwater management mechanisms; the investigation of uncontrolled and abandoned waste sites, and monitoring, inspections and enforcement in all media. My point in mentioning this need is that most states do not believe they are adequately funded at present, much less that environmental program funds can be reduced. The states will not be able to increase their efforts in these areas in the face of reduced federal support.

Although most of my remarks have been in regard to state management grants, please understand that our concerns extend to other areas of the EPA budget as well. In particular, we hope that funding for technical assistance to states and research and development activities will not be reduced. We have strong doubts that adequate research and development will be undertaken by the private sector. The increasing complexity of our environmental problems and economies of scale also argue for a strong federal R and D program on pollution control.

In summary, I want to reiterate that the Governors and the state pollution control officials remain committed to strengthening and improving the federal-state partnership in environmental protection. We believe that requires level funding for the EPA in FY 1983, and look forward to working with the Congress to help develop the more effective partnership we believe in.

The State of the States:
Management of Environmental Programs in the 1980's

This report was prepared by Thomas W. Curtis of the National Governors' Association Energy and Environment Committee, under the direction of Edward A. Helme, Staff Director. Research assistance was provided by Peter Creedon of the NGA Energy and Environment Committee. Special thanks are owed to Bill Becker and Ann Renauer of the State and Territorial Air Pollution Program Administrators, Robbi Savage and Lynn Eichmiller of the Association of State and Interstate Water Pollution Control Administrators, and David Duncan of the Association of State and Territorial Solid Waste Management Officials.

Energy and Environment Committee
National Governors' Association
400 North Capitol Street, N.W.
Washington, D.C. 20001

Background

The landmark environmental legislation enacted in the 1960's and 70's helped establish a state-federal partnership in the management and protection of environmental quality. The partnership involved a division of responsibility for environmental programs, with the Environmental Protection Agency providing funds to assist state agencies develop and administer federally mandated programs for managing air and water quality, hazardous waste, pesticides, and water supply. In fiscal year 1982, the federal assistance for these management programs totaled $227.8 million, and represented approximately 50% of total state expenditures on these activities. These figures do not include state or federal expenditures for the construction of sewage treatment plants.

For fiscal year 1983 the Administration has proposed reducing funds which support state management of environmental programs by 20%, and may propose further reductions in future years. In proposing these cuts, the Environmental Protection Agency has assumed that all environmental programs are now adequately funded and that improved management practices can reduce the cost of environmental programs without lowering the quality of environmental protection. Although states have indicated a willingness to assume greater responsibilities for environmental program management, the proposed 20 percent cutback comes at a time when most state budgets are reflecting the twin effects of last year's federal budget cuts and the continued recession. At least two-thirds of the states are experiencing revenue shortfalls from earlier projections. Virtually every state legislature meeting this year has raised taxes and/or made significant cutbacks in government activities while straining to cope with major reductions in federal support for human service programs. At the same time, the states have already absorbed inflation related "budget cuts" in environmental programs, because of relatively flat funding over the past several years and an actual reduction in funding in FY 1982. State environmental program managers have streamlined their programs over the past several years and eliminated inefficiences. This situation increases the difficulty of absorbing even relatively small cutbacks in federal support.

In order to assess the ways in which states will respond to the proposed reductions in federal support, the National Governors' Association Energy and Environment Committee, chaired by Governor Jay Rockefeller (WV), undertook a survey of states' management of environmental programs, in cooperation with the State and Territorial Air Pollution Program Administrators (STAPPA), the Association of State and Interstate Water Pollution Control Administrators (ASWIPCA), and the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). The survey focused on sources of funds for environmental programs, with particular regard to permit fees and other non-federal sources, and on changes in management practices that the states anticipate if federal support is reduced. The survey covers state air program grants under section 105 of the Clean Air Act; water quality management grants under sections 106 and 205(g) of the Clean Water Act; hazardous waste management grants under section 3011 of the Resource Conservation and Recovery Act; and water supply management grants under section 1443 of the Safe Drinking Water Act.

Summary of Findings

The survey strongly suggests that in most states, a 20% reduction in federal support would require curtailment in a number of environmental protection activities by a level at least proportionate to the reduction in federal support. Because states may still be required to respond to federal mandatory requirements, the activities most likely to be curtailed by the states include resource intensive activities such as monitoring of ambient pollution levels, monitoring of compliance by emission sources, permitting, technical support, and enforcement, in all environmental media (air,water quality, and hazardous waste). A significant number of state agencies would seriously consider eliminating, not accepting delegation of, or returning to the federal government several environmental protection activities. This particularly applies to air programs, including PSD permitting, control of toxic pollutants, vehicle inspection and maintenance programs, and the development of emission trading systems. Some of these activities, such as emission trading systems, air quality banking, and bubble programs, could substantially reduce the cost of compliance for emission sources, but increase the states' cost for environmental program management. The survey also suggests that personnel reductions may in many states increase the time required for sources subject to regulation to obtain permits. The survey suggests that in the short run most states will not be able to increase non-federal sources of funds, including state appropriations and collections from permit fee systems, to make up for the reduction in federal support. Finally, most states suggest a strong need to increase their efforts in certain areas, such as toxic pollutant control, if increased resources were available. Such expanded activities will not be possible in the face of reduced federal support.

Findings

The survey has revealed a number of facts germane to the debate about how, and how much, federal support for state environmental management activities could be reduced without reducing the ability of states to adequately implement federal environmental programs. The salient findings include the following facts:

- Federal support plays an important role in environmental program management. While the figures vary widely from state to state, in aggregate terms federal funds provide about 45% of state air program budgets, about 46% of state water quality program budgets, about 69% of state hazardous waste program budgets, and about 48% of state water supply program budgets. The states have increased their support of environmental programs as the programs progress from the planning stage to implementation, but federal support remains important. See Table I.

- Only a small number of states expect to be able to make up for a 20% reduction in federal support by increasing state funds, in the face of their own severe financial constraints. Six states hope to be able to make up at least part of the reduction in air program funds. Three states indicate the possibility of increased support to make up for at least part of the reduction in water quality grants, 11 states hope to replace at least part of the reductions in hazardous waste grants, and 6 states hope to make up for at least some of the reduction in support for water supply programs. Given the continuing pressures on state budgets, these figures may be optimistic.

- Most state environmental agencies will not be able to rely on permit fees to provide funds for environmental programs, at least in the short run. Many states do not have existing statutory authority to collect permit or processing fees. About 21 states and territories currently charge for air quality permits, but in only 10 are the funds available to the permitting agency. In only 9 states and territories are water quality permit fees available to the permitting agency; only 7 hazardous waste agencies collect and keep permit fees, and only 2 water supply agencies actually keep permit fees. In other states which charge permit fees, revenues are deposited in the state general fund. Indeed, in most states it has historically been considered good public policy to place such revenues in the general fund to avoid the appearance of conflict of interest between regulators and emission sources. Given the budget pressures in most states, collections may not go to the environmental management agency even where permit fee programs are established or fees are increased. See Tables II-V.

- Most states suggest the need to increase their efforts in a number of key for states to develop more vigorous programs in these areas without retrenchment elsewhere. Those areas most frequently mentioned by the states as needing increased effort if federal funds for environmental programs were increased include:

  Air: increased toxic emissions control, increased inspections and monitoring, increased enforcement, development of bubble and controlled trading systems, and increased staff for permit processing;

  Water Quality: development of groundwater management mechanisms, increased water quality monitoring and bio-assay analysis, enhancement of toxic pollutant control programs, increased resources for sewage treatment plant operator training and technical assistance, and strengthening the NPDES permitting program;

  Hazardous Waste: increased investigations of uncontrolled and abandoned waste sites, increased compliance monitoring, increased enforcement, increased efforts to protect groundwater, and increased staff for permit processing;

  Water Supply: increased monitoring and inspections of municipal water systems, increased resources for water treatment plant operator training, increased technical assistance, and increased resources for small and non-community water supply protection.

- A significant number of states expect a delay in the time necessary to process and issue permits under federal environmental statutes as a result of the reduction in federal support for environmental program management. In other states, many of which are subject to mandatory time limits for issuing permits, the quality of permit review is expected to decline. About 27 states have indicated they expect the time necessary to issue air permits to increase by an average of about 24%. About 18 states also expect water quality permitting time and about 19 states expect hazardous waste permitting times to increase. These figures are tentative because many states are not yet certain whether or by how much their permit processing time will be increased by cuts in program budgets.

- A large number of state agencies indicate that they are considering completely eliminating, not accepting delegation of, or turning back to the federal government certain important environmental protection activities, particularly in the air program. At least 11 states may eliminate or turn back PSD permitting in the air program, and 7 states may eliminate their activities to control toxic air emissions. At least 10 states indicate they will not have the resources to develop air emissions bubble and banking systems, which can reduce compliance costs for the business community but which increase the costs to state regulatory agencies. These findings raise questions about the states' capacity to assume programs for which they currently do not have delegation, such as hazardous waste management and underground injection control, in which the Administration would like the states to assume greater responsibility.

- In addition, a large number of states have indicated that they may reduce certain environmental management activities proportionately to the reduction in federal support or more. This reflects the states' belief that they have already streamlined state programs and that significant further savings cannot be expected from management changes alone. Many states indicate that budget reductions will require actual reductions in personnel and equipment. At least 36 states indicate that they will reduce ambient air quality monitoring proportionately to the reduction in federal budget support or more; 25 states will reduce water quality monitoring proportionately or more, while 20 states will reduce hazardous waste monitoring proportionately to the reduction in federal support or more. Other important activities including enforcement, toxic air pollutant control, general and PSD permitting, determinations of source compliance, technical support, and the development of emission trading systems, will also be reduced at least proportionately to the federal cuts in significant numbers of states. In addition, program development, including the development of 1982 air program implementation plans for both mobile and stationary sources, will be curtailed proportionately to the federal cuts or more in a number of states. See Tables VI-IX.

Table 1

FY 1982 Federal Support of Environmental Programs
(% of total program costs)

	AIR	WATER QUALITY	HAZARDOUS WASTE	WATER SUPPLY
ALABAMA	60			
ALASKA	53	35	40	45
ARIZONA	48	81		77
ARKANSAS	54	55	75	75
CALIFORNIA	10	38		
COLORADO	32	55	58	56
CONNECTICUT	60	75	100	
DELAWARE	59	63	67	75
FLORIDA	24	13	89	48
GEORGIA	49	51	75	43
HAWAII	59	48	85	61
IDAHO		79	82	76
ILLINOIS	63	70		61
INDIANA	57	32	75	0
IOWA	71	62	62	0
KANSAS	75	52	73	66
KENTUCKY	43	38	28	80
LOUISIANA	44	17	59	29
MAINE	62	58	100	62
MARYLAND	45	56		87
MASSACHUSETTS	62	64	48	41
MICHIGAN	38	51	69	45
MINNESOTA	52	54	41	44
MISSISSIPPI	60	51	59	75
MISSOURI	64	89	60	
MONTANA	68	87	86	79
NEBRASKA	75	86	75	60
NEVADA	52	64	68	60
NEW HAMPSHIRE	74	90	39	70
NEW JERSEY	45			66
NEW MEXICO	61	25	75	59
NEW YORK	67			
NORTH CAROLINA	51	44	74	54
NORTH DAKOTA	51	68	75	75
OHIO	74			
OKLAHOMA	63	78	66	47
OREGON	36	42	78	0
PENNSYLVANIA				
RHODE ISLAND	73	75		75
SOUTH CAROLINA	49	31	59	36
SOUTH DAKOTA	74	69	83	
TENNESSEE	40	35	58	58
TEXAS	30	35	81	45
UTAH	75	56	71	53
VERMONT	75	78	100	38
VIRGINIA	44	21	73	46
WASHINGTON	51	66	73	55
WEST VIRGINIA	52	50	75	51
WISCONSIN	51		75	
WYOMING	56	56		
AMERICAN SAMOA				
GUAM				
PUERTO RICO	77	56	72	75
VIRGIN ISLANDS				
DISTRICT OF COLUMBIA				
NORTHERN MARIANA ISLANDS				

Table II

AIR QUALITY PERMITTING FEES

	Does the state have authority to collect air permitting or processing fees?	Does the state actually collect air permitting fees?	Does the state intend to develop authority or collect fees in the near future?	Is the fee available to the permitting agency?	What percent of the agency's operating budget is provided by the fee?
ALABAMA	no				
ALASKA	no				
ARIZONA	yes	yes		no	
ARKANSAS	no		yes FY83		
CALIFORNIA	yes	yes		local agencies	varies
COLORADO	yes	yes		no	
CONNECTICUT	yes	no	yes-FY 83		
DELAWARE	yes	no	yes		
FLORIDA	yes	yes		no	
GEORGIA	yes	no			
HAWAII	yes	yes		no	
IDAHO					
ILLINOIS	yes	no	proposed		
INDIANA	yes	yes		no	
IOWA	yes	no			
KANSAS	no				
KENTUCKY	yes	yes		yes	5%
LOUISIANA	yes	yes		yes	12%
MAINE	yes	yes		no	
MARYLAND	yes	no	yes FY 83		
MASSACHUSETTS	no		yes FY 83		
MICHIGAN	yes	yes		yes	15[1]
MINNESOTA	no				
MISSISSIPPI	no				
MISSOURI	yes	yes		no	
MONTANA	yes	no			
NEBRASKA	yes	no			
NEVADA	yes	yes		no	
NEW HAMPSHIRE	yes	yes		yes	7%
NEW JERSEY	yes	yes		no	
NEW MEXICO	yes	no			
NEW YORK	yes	yes		yes	n/a[2]
NORTH CAROLINA	yes	no			
NORTH DAKOTA	yes	yes		yes	11%
OHIO	yes	yes		no	
OKLAHOMA	yes	yes		yes	under 1%
OREGON	yes	yes		yes	49%
PENNSYLVANIA	yes	no	proposed for FY83		
RHODE ISLAND	no				
SOUTH CAROLINA	no				
SOUTH DAKOTA	no				
TENNESSEE	yes	no			
TEXAS	yes	no	yes FY 83		
UTAH	yes	yes		no	
VERMONT	no		considering		
VIRGINIA	no				
WASHINGTON	no		will propose 83		
WEST VIRGINIA	no				
WISCONSIN	yes	no	proposed for FY84		
WYOMING	no				
AMERICAN SAMOA					
GUAM	no				
PUERTO RICO	yes	yes		yes	
VIRGIN ISLANDS					
DISTRICT OF COLUMBIA					
NORTHERN MARIANA ISLANDS					

[1] Program will be phased out by FY 1985

[2] Program recently authorized and has not yet generated any revenue.

TABLE III

Water Quality Permitting Fees

	Does the state have authority to collect water quality permitting fees?	Does the state actually collect water quality permitting fees?	Does the state plan to develop authority or collect fees in the near future?	Is the fee available to the permitting agency?	What portion of the agencies operating budget is provided by the fee?
ALABAMA					
ALASKA	no				
ARIZONA	no				
ARKANSAS	no		yes 1983		
CALIFORNIA	yes	yes		yes	10%
COLORADO	yes	yes		yes	13%
CONNECTICUT	no				
DELAWARE	yes	no	yes		
FLORIDA	yes	yes		no	
GEORGIA	no				
HAWAII	yes	yes		no	
IDAHO	yes	no			
ILLINOIS	yes	no			
INDIANA	yes	yes		no	
IOWA	yes	no			
KANSAS	yes	yes		no	
KENTUCKY	yes	no	yes		
LOUISIANA	yes	yes		yes	17%
MAINE	yes	yes		no	
MARYLAND	yes	yes		no	
MASSACHUSETTS	yes	no	yes		
MICHIGAN	yes	no			
MINNESOTA	no				
MISSISSIPPI	no				
MISSOURI	yes	yes		yes	under 1%
MONTANA	no				
NEBRASKA	yes	no	proposed		
NEVADA	yes	yes		yes	under 1%
NEW-HAMPSHIRE	no				
NEW JERSEY	yes	yes		yes	100%
NEW MEXICO	no				
NEW YORK					
NORTH CAROLINA	no				
NORTH DAKOTA	no				
OHIO					
OKLAHOMA	no				
OREGON	yes	yes		yes	5%
PENNSYLVANIA					
RHODE ISLAND	no		proposed		
SOUTH CAROLINA	no				
SOUTH DAKOTA	no				
TENNESSEE	no				
TEXAS	yes	yes		no	
UTAH	no				
VERMONT	yes	yes		yes	under 1%
VIRGINIA	no				
WASHINGTON	yes	no			
WEST VIRGINIA	yes	yes		no	
WISCONSIN					
WYOMING	no				
AMERICAN SAMOA					
GUAM	no				
PUERTO RICO	yes	yes		yes	
VIRGIN ISLANDS					
DISTRICT OF COLUMBIA					
NORTHERN MARIANA ISLANDS	yes	yes		no	

TABLE IV

Hazardous Waste Permitting Fees

	Does the state have authority to collect hazardous waste permitting or processing fees?	Does the state acutally collect such fees?	Does the state intend to develop authority or collect such fees in the near future?	Are fee collections available to the permitting agency?	What portion of the agency's operating budget is provided by the fee?
ALABAMA					
ALASKA	no				
ARIZONA	no				
ARKANSAS	yes	no			
CALIFORNIA					
COLORADO	no				
CONNECTICUT	no				
DELAWARE	yes	no			
FLORIDA	yes	no			
GEORGIA	no				
HAWAII	yes	yes		no	
IDAHO	yes	no	proposed		
ILLINOIS	yes	yes			
INDIANA	yes	no			
IOWA	no				
KANSAS	yes	yes		no	
KENTUCKY	yes	yes		no	
LOUISIANA	yes	yes		yes	59%
MAINE	yes	no	proposed		
MARYLAND					
MASSACHUSETTS	yes	yes		no	
MICHIGAN	yes	yes		no	
MINNESOTA	no				
MISSISSIPPI	no				
MISSOURI	yes	yes			
MONTANA	yes	no			
NEBRASKA	yes	no			
NEVADA	yes	no			
NEW-HAMPSHIRE	yes	yes		yes	n/a
NEW JERSEY	yes	yes		no	
NEW MEXICO	yes	no			
NEW YORK					
NORTH CAROLINA	no				
NORTH DAKOTA	no				
OHIO					
OKLAHOMA	no				
OREGON	yes	yes		yes	14%
PENNSYLVANIA					
RHODE ISLAND	yes	yes		yes	N/A
SOUTH CAROLINA	no				
SOUTH DAKOTA	no				
TENNESSEE	yes	yes		no	
TEXAS	yes	yes			
UTAH	no				
VERMONT	no				
VIRGINIA	no				
WASHINGTON	no				
WEST VIRGINIA	yes	yes		yes	n/a
WISCONSIN	yes	yes		yes	11%
WYOMING					
AMERICAN SAMOA					
GUAM	no				
PUERTO RICO	yes	yes		yes	
VIRGIN ISLANDS					
DISTRICT OF COLUMBIA					
NORTHERN MARIANA ISLANDS					

Table V

Water Supply Permitting Fees

	Does the state have authority to collect water supply permitting or processing fees?	Does the state actually collect such fees?	Does the state intend to develop authority or collect fees in the future?	Is the fee available to the permitting agency?	What portion of the agency's operating budget is provided by the fee?
ALABAMA					
ALASKA	no				
ARIZONA	no				
ARKANSAS	yes	yes		no	
CALIFORNIA					
COLORADO	no				
CONNECTICUT					
DELAWARE	no				
FLORIDA	yes	no	proposed		
GEORGIA	no				
HAWAII	no				
IDAHO	no				
ILLINOIS	yes	no			
INDIANA	yes	no			
IOWA	no				
KANSAS	yes	yes		no	
KENTUCKY	yes	no			
LOUISIANA	no				
MAINE	no				
MARYLAND	yes	no			
MASSACHUSETTS	yes	yes		yes	under 1%
MICHIGAN	yes	no			
MINNESOTA	no				
MISSISSIPPI	no				
MISSOURI	no				
MONTANA	no				
NEBRASKA	yes	yes		yes	15
NEVADA	yes	no	yes FY 84		
NEW HAMPSHIRE	no	no			
NEW JERSEY	no		investigating		
NEW MEXICO	no				
NEW YORK					
NORTH CAROLINA	no				
NORTH DAKOTA	no				
OHIO					
OKLAHOMA	no				
OREGON	no				
PENNSYLVANIA					
RHODE ISLAND	no				
SOUTH CAROLINA	no				
SOUTH DAKOTA	no				
TENNESSEE	no				
TEXAS	no				
UTAH	yes	no	yes FY 84		
VERMONT	no				
VIRGINIA	no				
WASHINGTON	no				
WEST VIRGINIA	no				
WISCONSIN					
WYOMING					
AMERICAN SAMOA					
GUAM	yes	yes		no	
PUERTO RICO	no				
VIRGIN ISLANDS					
DISTRICT OF COLUMBIA					
NORTHERN MARIANA ISLANDS	no				

Table VI

States' Response to a 20% Reduction in Federal Support

Air Programs

Environmental Program Activity	Eliminate Activity	Reduce Proportionately to Budget Cut or More	Not Reduce Activity
	Number of States		
General Permitting	2	27	12
PSD Permitting	11	21	11
Compliance Determination	1	33	5
Enforcement Against Non-Complying Sources	1	26	13
Toxic Emission Control	7	14	9
Ambient Air Quality Monitoring	1	36	2
Emissions "bubbles"	8	17	9
Emissions "banking"	10	14	4
'82' SIP Development (Stationary)	3	16	3
'82' SIP Development (Mobile)	4	14	3
I/M	4	8	6
Other	0	12	2

Table VII

States' Response to a 20% Reduction in Federal Support

Water Quality Programs

Environmental Program Activity	Eliminate Activity	Reduce Proportionately to Budget Cut or More	Not Reduce Activity
	Number of States		
Program Development	0	26	7
Permitting	1	17	6
Compliance Monitoring	0	25	4
Enforcement	0	20	7
Technical Support	0	19	5
Other	2	10	2

Table VIII

States' Response to a 20% Reduction in Federal Support

Hazardous Waste Programs

Environmental Program Activity	Eliminate Activity	Reduce Proportionately to Budget Cut or More	Not Reduce Activity
	Number of States		
Program Development	2	21	8
Permitting	1	16	7
Compliance Monitoring	1	20	6
Enforcement	1	15	9
Technical Support	1	19	5
Other	2	12	1

Table IX

States Response to a 20% Reduction in Federal Support

Water Supply Programs

Environmental Program Activity	Eliminate Activity	Reduce Proportionately to Budget Cut or More	Not Reduce Activity
	Number of States		
Program Development	1	11	8
Permitting	0	4	12
Compliance Monitoring	0	12	7
Enforcement	1	16	3
Technical Support	2	8	9
Other	0	4	1

STATEMENT OF WILLIAM DRAYTON, CHAIRMAN, AMERICAN ENVIRONMENTAL SAFETY COUNCIL

Senator LEAHY. Our next testimony will be from Mr. William Drayton, the chairman of the American Environmental Safety Council.

Mr. Drayton, your testimony is extremely good, and I think the conclusions are very hard hitting. I will put the whole testimony, complete with the charts and records, into the record. And I would like to go to some questions and allow you to answer those questions, also summarizing any parts you want to reiterate in your testimony.

I also wish to express my own appreciation for the whistle blowing you have done with regard to EPA. I think had you not done that the EPA would be in worse shape than it is today. I think without some of the material that you have provided to the public it would have been more difficult for myself and other like-minded Members of Congress, both Republican and Democrat, to be able to raise the concerns that we have raised about it. I also find that each time we raise these concerns EPA gives a little bit, grudgingly, but a little bit here and there, and I think a lot of that is due to the question you have raised originally.

RIF'S AT EPA

There is one thing. The Administrator of EPA, Mrs. Gorsuch, has implied before this committee there is no truth to reports of major RIF's at EPA. On one of the morning news programs she made the same point recently. She quoted some numbers which seemed to be quite at variance with the testimony and facts that this committee and others have raised. She says there is no truth to the reports there are major RIF's considered at EPA. Is there truth to those reports?

Mr. DRAYTON. Before I get to that, I think everyone in our community is enormously appreciative of your willingness to stand up against a mind set of not focusing on what is needed, not focusing on the substance which is being caught in the budget framework, willing to stand out against that when it is politically difficult to do on behalf of the public's health. As you know, there are all too few people who have been willing to do that this last year. We are tremendously appreciate of your leadership.

Senator LEAHY. Thank you very much.

Mr. DRAYTON. This RIF program Mrs. Gorsuch and her staff have designed began in October. The extensive work, literally boxes of paper documentation, the personnel office, the budget offices, all different parts of the Agency, her own immediate staff, and, to some limited degree, OMB were all involved in this undertaking. There is no question it was ongoing. The program was to bring the Agency down to the then inside the administration's 1983 objectives for the EPA budget in 1982. And if I may I would like to submit a memorandum from the head of the budget office of the air program that is quite explicit on that point.

Senator LEAHY. It will be made a part of the record.

[The memorandum follows:]

MEMORANDUM FROM EDWARD F. TUERK, DIRECTOR OF PROGRAM MANAGEMENT OPERATIONS, ENVIRONMENTAL PROTECTION AGENCY

NOVEMBER 4, 1981.

Subject: 1981 accomplishments and 1982 operating plans.
From: Edward F. Tuerk, Director, Program Management Operations.
Memo to: Kathleen M. Bennett, Assistant Administrator for Air, Noise, and Radiation.

There is attached a discussion of 1981 program accomplishments and 1982 operating plans covering all of your program areas. We have found this type of summarization extremely helpful, both for purposes of budget preparation and as a way of tracking operating plans throughout the fiscal year. The plans, as displayed in the attachments, reflect the funding in the 1982 Reagan budget submission. Adjustments will be required subsequent to the final action on of the President's revised proposals.

Not discussed in the attachments is the need to reduce staff in all program areas during 1982 in order to meet the levels proposed in our 1983 within-ceiling request. The following table gives some indication of the magnitude of change required:

	Current on board	1983 PFTE
AA office	38	21.4
ONAC	40	0
ORP	123	114.1
OAQPS	254	228.2
OMSAPC	184	149.0
OANRE	120	101.0
Total	759	613.7

It is unclear at this time in what areas RIF's will be necessary. Noise certainly; OAQPS probably, since they have little turnover and will be adding six people this month as a result of the ORD RIF at RTP; your office to accommodate the reduction in OTLUP, perhaps. OMSAPC has just completed a reduction-in-force to bring them to their 1982 authorized levels, but given the high turnover in Ann Arbor a further RIF may not be required. The OANRE numbers assume that 19 live bodies will be transferred to OLCE as part of the Enforcement split here, and in ORP attrition should be sufficient to reach 1983 levels.

OANR HQ OPERATING PLANS AS OF 11/2/81

	Fiscal year				
	1981	1982 Original	1982 Change 1	1982 Change 2 current	1983
OAA:					
S&E	1,663.7	2,781.6	$2,662.7	2,223.1	1,387.9
AC&C	215.0	200.0	200.0	145.2	0
Total	1,878.7	2,981.6	2,862.7	2,368.3	1,387.9
PFTE	38.0	43.5	41.0	41.0	21.4
OPFTE	12.7	13.2	13.2	13.2	6.6
ONAC:					
S&E	3,333.7	2,162.3	2,191.8	2,044.8	0
AC&C	7,243.1	365.4	365.4	283.5	0
Total	10,576.8	2,527.7	2,557.2	2,328.3	0
PFTE	62.4	36.7	36.7	36.7	0
OPFTE	26.8	15.2	15.2	15.2	0
ORP:					
S&E	6,663.8	7,680.2	7,352.8	6,420.6	6,842.5
AC&C	3,321.9	2,322.9	2,322.9	1,802.7	2,195.7
Total	9,985.7	10,003.1	9,675.7	8,223.3	9,038.2
PFTE	144.7	124.2	124.2	124.2	114.1
OPFTE	26.0	24.8	24.8	24.8	21.3
OAQPS:					
S&E	10,765.3	10,954.0	10,698.4	10,046.5	10,718.5
AC&C	20,345.7	16,248.3	16,248.3	12,475.9	12,609.5
Total	31,171.0	27,202.3	26,946.7	22,522.4	23,328.0
PFTE	268.7	262.8	262.8	262.8	228.2
OPFTE	23.5	22.4	22.4	22.4	18.4

OANR HQ OPERATING PLANS AS OF 11/2/81—Continued

	Fiscal year				
	1981	1982 Original	1982 Change 1	1982 Change 2 current	1983
OMSAPC:					
S&E	11,713.2	12,165.4	11,603.0	9,917.9	10,515.6
AC&C	3,737.1	3,358.9	3,358.9	1,782.7	3,038.3
Total	15,450.3	15,524.3	14,961.9	11,700.6	13,553.9
PFTE	219.8	186.4	186.4	186.4	149.0
OPFTE	65.4	62.2	62.2	62.2	49.8
OANRE:					
S&E	8,206.4	7,235.6	6,921.3	6,062.9	5,577.7
AC&C	10,373.9	11,340.8	11,340.8	8,335.9	6,915.6
Total	18,580.3	18,576.4	18,262.1	14,998.8	12,283.3
PFTE	195.1	164.3	166.8	166.8	101.0
OPFTE	60.9	42.3	42.3	42.3	30.1
OANR:					
S&E	42,346.1	42,979.1	41,430.0	36,715.8	35,042.2
AC&C	45,236.7	33,836.3	33,836.3	24,825.9	24,759.1
Total	87,582.8	76,895.4	75,266.3	61,541.7	59,801.3
PFTE	928.7	817.9	817.9	817.9	613.7
OPFTE	215.3	180.1	180.1	180.1	126.2

Mr. DRAYTON. As the attrition rate accelerated over the fall, the total number of people that this program would have fired at EPA headquarters declined—4,500 in October to about 1,000 or 800 at the end of the summer. The program was planned to be announced at the end of January. It would have resulted in all but a couple of hundred people of the 5,300 people that the Regean administration inherited at EPA headquarters on January 24, 1981, either being fired, having quit, or being downgraded as a result of the bumping involved in that large number of firings. By this June; that is, there would really be nothing functionally left there.

As to whether or not this is true, such a massive undertaking involving so many people was widely known. We would be very happy to submit a collection of documentations for the committee's use, including such things as lists of people who would remain in some divisions after the RIF's were completed, schedule of activities, et cetera.

Senator LEAHY. I wonder, if in that regard, you might be willing to meet later with my staff and go over some of that material and let us make some selections out of it. I would also then ask the record remain open for the possible inclusion of futher material.

Mr. DRAYTON. Certainly.

Senator LEAHY. Go ahead, Mr. Drayton.

MANAGEMENT WITHIN EPA

Mr. DRAYTON. Further, I would point out the responsible Assistant Administrator, Mr. Horton, repeatedly confirmed the Agency was planning to fire, in varying conversations with the press, somewhere between 750 and 800 people when he was asked to confirm there was such a program. That is on the record in a number of papers, Time magazine, New York Times, et cetera. And other members of the Gorsuch staff had also confirmed that this program was underway in separate conversations with them.

So I find it really quite extraordinary that Mrs. Gorsuch was implying that there was no such program or that she had not heard of such a program. It is very odd that people outside the Agency, hundreds of people in the Agency would know of this program and the Administrator wouldn't, given its extraordinary potential impact. I think that raises issues of management grip, if not of disingenuousness.

Senator LEAHY. I think that is so. I also think that a lot of it is reflected in the fact that not enough of us have been calling the Agency on some of these numbers when they start tossing them around. One of the things I have tried to do here, probably one of the marks of our success, is that indeed they are looking for additional staff. That is the good news. The bad news is, of course, when the additional staff required is a public relations official. I happen to think in the environmental field the best public relations is good, strict enforcement of our environmental laws, realistic laws to begin with, and efforts to work with people in maintaining those laws. The irony of all of this is that the vast majority of the people in this country want good environmental laws. Good businesses want good environmental laws. In fact, our better businesses are going to obey the law, and they are quite concerned, at least what they tell me, that if there isn't a willingness on the part of Government to enforce the law, because for corporate image or whatever the reasons they will be obeying, knowing their competitors will be able to get away not obeying, and, of course, a competitive disadvantage will arise. The vast majority of the people want the laws enforced. And I don't think it is really necessary for EPA to hire a public relations office to be able to tell them that. I think again they could save that money and simply go out and obey the law themselves, carry out the mandate of the Congress, and the result would probably be the best publicity and reaction they could get. These are not extremists or radical people who are calling for the enforcement of our environmental laws. They range through all ages, all political fields, every economic category. People just like to think of the United States from sea to shining sea, with everything else in between, means precisely that.

I take it then you feel funding at 1982 for 1983 is probably not adequate.

Mr. DRAYTON. To say the least. We are faced with a situation where what is realistic in the current political budget context is just disassociated with what is realistic from a program point of view. And the analysis published by the National Wildlife Federation that we and some 30 other people with indepth program expertise put together using EPA's own workload analyses data gives a reasonably rigorous estimate of what those workload needs are, and, as you know, that is over a $2 billion operating program, which is not even within the realm of discussion at the moment.

On the other hand, that is the reality of the work that has to be done, and if the funds are not there the work will not get done. It is, unfortunately, a very straightforward calculation. Half the Agency can't do twice the work.

REDUCTIONS IN EPA'S BUDGET

Senator LEAHY. In fact, while your whole statement is in the record, I would like to reread one part of your summary in which you speak of the other cuts in EPA. You say, and I quote:

> That means EPA won't be able to do either its old or its new job. The air and water will become dirtier. And the public will not be protected against environmental toxics. One has to believe in magic, not management, to think that half the Agency can do twice as much.

Have you seen anything in the hearings we have had on this budget that would make you withdraw from the statement you have made there?

IMPACT OF REDUCTIONS

Mr. DRAYTON. Not at all. In fact, I think as the results of the first round of cuts are already being seen, we are having those projections fully confirmed. If you look at the enforcement statistics, they are simply falling apart. A particularly vicious cycle of increasing workload, a gradual loss of credibility in the field leading to lower voluntary compliance, which in turn multiplies the workload in the field, further undermining the credibility is already well underway. If one thinks just in terms of budget, not even in terms of enforcement, that means that if we are ever to get a local enforcement we had as much as a year ago, we will have to spend much more to get the same level of results. We already have the statistics and can see that happening now.

Senator LEAHY. Thank you, Mr. Drayton.

Mr. Chairman, Mr. Drayton has testified on a number of things—that there really are RIF's at EPA, that the funding for 1983 at 1982 levels is really not adequate and his statements why. I have no further questions of him and I yield to you.

Senator GARN [presiding]. I have no questions. Thank you very much for your testimony.

[The statement follows:]

STATEMENT OF WILLIAM DRAYTON, CHAIRMAN, AMERICAN ENVIRONMENTAL SAFETY COUNCIL

Mr. Chairman, all of us who care about the survival of a competent U.S. Environmental Protection Agency, which is essential if any of us in this country is to be protected from growing environmental hazards, appreciate the scrutiny you and your colleagues in the Congress will be giving the Reagan Administration's budget program for EPA.

I wish I did not have to criticize those who have succeeded me and my former colleagues at EPA. However, as the person responsible for the Agency's policy, budget, and management arms during the four preceding years, I believe I understand the implications of this extraordinary series of budget cuts as clearly as any. The implications are profound, radical, and irreversible. I hope I will be able to help the subcommittee understand what these cuts will mean.

Let me quickly summarize:

* The EPA's workload doubles over the next several years: in addition to its existing responsibilities, Congress has required it to protect the public from the toxic byproducts of the chemical revolution.

* The Reagan-Gorsuch budget cuts EPA roughly in half during exactly this period.

* That means EPA won't be able to do either its old or its new job. The air and water will become dirtier. And the public will not be protected against environmental toxics. One has to believe in magic, not management, to think that half the Agency can do twice as much.

* This country's institutional capacity to understand and manage the environment will be destroyed if you do not stop this program right now. If the Congress does not act now:

  - The nation's independent environmental research effort will lose two thirds its EPA support and therefore many of its best scientists, the continuity of critical data bases, most of its university labs, and most of their graduate students within 12 months. A determined effort to rebuild even if begun one year later (1984) could produce its first trickle of scientific results only by 1988 and 1989.

  - EPA will lose its legal credibility. It has already lost almost all its seniormost career lawyers. Without these skilled lawyers and without adequate scientific backup, its regulatory and enforcement work will increasingly fail in court, leaving a jumble of bad precedents that will take a great many years to undo.

  - EPA will lose credibility with both the states and industry, leading to a virtually irreversible downward spiral of lost credibility, lessening voluntary compliance, therefore sharply increasing field workload, and consequent further loss of credibility.

  - EPA has already lost or is now losing the cream of its senior civil service--the core of key people with the expertise, wisdom, and respect that are critical to any large institution. Most joined the Agency during the Nixon and Ford years of the Agency's start-up growth and could not possibly be replicated for many, many years. The two civil servants the Reagan Administration looked to to run the Agency before Mrs. Gorsuch came to EPA last May, both ten year veterans and both winners of the President's top civil service award, both quit this month.

Before expanding on each of these key points in order, I hope the Committee will allow me to respond briefly to Administrator Gorsuch's repeated attacks on the Agency. It is not possible to compensate for this budget with "better management" of the public relations office and the correspondence control system. Nor is this budgetary equivalent to the medieval prescription of massive blood-drawing a plausible remedy for problems requiring real reform. More important still, I feel these attacks are as unfair and harmful as they are inaccurate. Through the last three Administrations EPA has been widely recognized as one of the most professional, spirited, and competent public agencies in the country. Let me quote Donald Lambrow, the highly conservative author of Fat City: How Washington Wastes Your Taxes, a book President Reagan recently sent his cabinet members:

> "These agencies are given high marks for maintaining scandal-free administrations as well as conducting themselves with a high degree of professionalism and competence:
>
> 1) Securities and Exchange Commission
> 2) Internal Revenue Service
> 3) Environmental Protection Agency"*

That's what we're about to lose.

Protecting the Public Against Toxics

During the same few years that the current Administration proposes cutting EPA in half, the Agency's workload roughly doubles.

That's because society decided in the 1970s to protect itself against the toxic side effects of the chemical revolution. Congress modified the water, air, drinking water, and groundwater statutes to require EPA to take on hundreds of toxics (e.g., cyanide and carbon tetrachloride) as well as the smaller number of relatively simple "traditional" pollutants (e.g., sulfur and total suspended solids). Congress also required a premanufacture safety review of all new chemicals, a similar review for the first time of the tens of thousands of chemicals now in common use, comprehensive regulation of hazardous wastes (a program as big as either the established air or water programs), and cleanup of hazardous spills and the mess we've made over decades of uncontrolled hazardous waste practices (e.g., Love Canal). The legislation and necessary subsequent scientific, legal, and technical groundwork is now largely laid down. Now the work must actually be done--terribly technical work with many tens of thousands of companies.

---

* Donald Lambrow, "The Best and the Worst in Government Agencies," The Washington Magazine, May 81.

Let me give you a brief example: the impact of these new requirements on the water quality program. Its traditional responsibilities remain undiminished; in fact they gradually increase year by year as economic growth steadily creates new and more discharges. In any case, existing resources have never been sufficient to reach 20 percent of the 50,000 sources of industrial pollution in theory regulated by the Clean Water Act.

After a four year and $130 million investment the Agency was ready this year to put in place effluent guidelines setting limits for roughly 120 priority toxic pollutants process by process, industry by industry. Once these regulations are released, they will have to be implemented. That involves:

* Re-writing 10,000 of the 40,000 outstanding permits.

* Working with the states and over 1,000 cities to control 40,000 industries discharging toxic wastes into sewers. (Congress required such controls once it realized that probably only 25 percent of major municipal wastewater treatment plants deal with even significant portions of such wastes. When cyanide meets a biological treatment system's digestive bugs, it destroys the bugs--not vice versa.)

Moreover, these 50,000 new and revised permits the states and EPA must negotiate will require more work permit by permit than the 40,000 permits they have negotiated over the last decade: They cover a larger number of generally more complex substances; they pose more difficult and expensive monitoring, lab testing, and enforcement burdens; and industry, the states, and EPA's own staff are much less familiar with these new requirements and the technologies upon which they rest.

The Administration's management improvement for this program that cannot do its existing job, and that is statutorily required to deal in addition with this new and larger toxics workload over the next several years, is to cut its staff and funding by 1/3 compared to FY 81 (ended September 30, 1981) levels.

Neither job will be done, and the effectiveness of our national water quality program will be undone if Congress allows these cuts.

The same pattern applies to the drinking and groundwater programs. They must deal with hundreds of long-lived, Latin-named horribles unknown to most public health officers even now, not just the traditional bugs and viruses. The same is true of the air program, though to a more limited degree because there has been less of a research investment there.

The President's budget also proposes deep cuts in the hazardous waste program, easily as big a job as either the air or water programs, just as it's starting up--again roughly a 1/3 cut in staff and purchasing power compared to FY 81.

How will citizens be able to trust a goverrnment certification that a hazardous waste disposal facility in their neighborhood is safe if EPA doesn't have the geo-hydrologists, toxicologists, and other necessary specialists to help the states--who don't have such people--do the job competently? Once citizens begin to distrust EPA's competence, who else will be able to persuade a community to accept any such site?

EPA's traditional workload in all areas, not just water quality, also continues to expand. Year after year, the population and economy experience compound growth. Without increasingly sophisticated regulation, the volume of pollution crowding into our forever fixed quantity of air, land, and water will also compound dangerously. Concentration levels are already well above anything with which we (and other living creatures) have learned to live over millions of years of evolution. Our bodies cannot suddenly adapt now.

Whereas regulation reduced the sulfur content of the air we breathe 17 percent over the 1970s, without it concentration levels would have grown 50-70 percent worse by 1990. Given the especially rapid growth of our chemical industries, the volume of toxics in our environment very probably will grow 60-100 percent over the coming decade without the major regulatory effort Congress mandated in 1976-80 that this budget makes impossible.

Despite the fact that its existing workload thus becomes steadily more demanding, and despite the one or more major new or expanded assignments Congress gave it on average every year over the last decade, EPA resources never kept up. The federal government grew very little, and OMB was too weak to reallocate according to workload. Consequently the typical EPA employee already is carrying a much heavier workload than peers in other departments. (In 1979-80 the average EPA lawyer produced between 1.2 and 10 times as many pages of formal opinions, had to deal with between 1.5 and 10 times as many major regulations, and was responsible for proportionately more pages of court opinion that their peers. Only one other agency had a higher ratio of total employees per program evaluator. EPA staff managing state grants had up to 20 times the work of their peers. The following charts sample some of the many cross-agency comparisons that make the same point: EPA was demonstrably understaffed even before its new toxics workload was assigned it. (Charts follow text.)

Several months ago, the National Wildlife Federation published an "honest budget" for EPA in FY 83. Over thirty colleagues with long program expertise, working through the AESC and NWF, prepared this budget using EPA's own workload models and data. Although brief and written in English, it is a fully rigorous budget analysis. It is also a conservative analysis: it cuts roughly $100 million from the base programs, and holds down 1983 needs as much as possible by deferring as many of the new toxic programs' responsibilities until 1984 and 1985 as possible. I attach copies of the summary volume.

This analysis shows that EPA needs $2.178 billion in 1983, or a 38 percent increase in real purchasing power over last year's (FY 81) budget.

A $2 billion operating budget is more than twice the Administration's request. We also fully appreciate that it's a sum well outside the framework of thinking that has defined this issue so far and that is therefore the reality of the Congressional budget process with which you are dealing.

However, there is the other reality. the program reality of workload measurement, of how much it takes to get the mandated job done.

Chopping EPA in Half

The Administration has, nonetheless, set about chopping EPA in half.

The President's budget for FY 83 would cut last year's authorized operating budget 24 percent in staff and 39 percent in purchasing power. These reductions do not consider the effects a further round of very deep cuts in the FY 84 budget we understand that OMB and EPA have been developing over the last six months. These cuts would reduce the Agency to half its last year's staff and slightly more than one third its real purchasing power. The following table maps the key milestones in the Reagan budget plans for EPA:

Reagan Reductions in EPA Budget Authority * vs Real Need

	FY 81 (ended 9/30/81) Budget Authority***	Reagan FY 83 Budget Authority Proposal	Reported FY 84 Administration Target***	Real FY 83 EPA Needs****
Permanent Positions	11,407	8,645	(very roughly) 6,000	16,549
$ Millions	1,356	961	(very roughly) 700	2,178
Real FY 81 $ Millions**	1,356	817	325	1,851

* Covers only core operating program, not capital grants budgets such as wastewater construction grants.

** We use the budget level authorized by the President and Congress for this past year rather than (a) the FY 82 Carter budget, which might be criticized as political, or (b) the Administration's estimated actual staff and spending levels of September 30, 1981, because they already include sharp reductions (e.g., over 1,000 permanent positions) caused by Reagan policy.

*** See, e.g., New York Times, Page 1, September 29, 1981.

**** "The Full Story Behind the EPA Budget Cuts", published by the National Wildlife Federation, February 1982.

Even if the Administration were to drop its 1984 budget targets and hold to 1983 levels, 5 percent inflation would reduce real purchasing power to $776 million--in the face of a workload well in excess of three times that amount.

The Public Not Protected

Half the Agency can't do twice the job.

Unless Congress acts now, the progress we've made will crumble, and the new programs to control environmental toxics will become incompetent cripples. A decade of legislation will become in large degree an illusion.

Most important, the public won't receive the protection it needs, wants, and thinks the government is ensuring.

A Lost Decade

The Reagan-Gorsuch program, if allowed to go ahead, would tear EPA up by the roots. It would take a new Administration that gave top priority to restoring this institution of public protection seven or eight years to get back to the 1980 level of competence.

Let's look, for example, at the impact of the proposed two thirds reduction in external research purchasing power. These cuts will mean the effective end of most of their work that has defined both our environmental problems and their solutions, i.e., the driving engine of environmental management and the only hope we have of escaping serious injury as a result of the steady compounding of our industrial and chemical impact on our environment. It's not just much of EPA's environmental research that will be torn up and scattered. It's the environmental work supported by EPA at Duke and Nebraska, the University of Washington and Harvard, at a hundred other universities and research institutes.

The scientists at Duke and Nebraska are just beginning to learn that they're out of business. So are their graduate students, the next generation of environmental researchers. These institutions and people will shift painfully to other fields over the next several years, and they'll be very difficult and, in many cases, impossible to get back later.

Assume a return to the environmental commitment of the 1970s one year after FY 1983. It will be the summerof 1985 before appointees are in place; the winter before senior civil servants follow; and the next year before new budget funds become available and a staff of contract and grant managers are hired. Only then will the universities begin to think about rebuilding their dissipated capacity. And only a year or so later (1988-89) will the first serious flow of new research become available. It will be 1990 before 1980's volume of research results will again be likely.

The process of unravelling bad legal precedents and rebuilding credibility in the courts, in the science community, with the states, with those the Agency regulates, and with the public will take at least as long and be at least as difficult.

During this lost decade, the environmental problem will get steadily worse. By 1990 our exposure to toxics in the environment is quite likely to double. Even the concentration of traditional pollutants like sulfur will grow very substantially.

If Congress accepts these proposed cuts, we will all have to accept a decade of seriously increased individual risk.

"The Agency is a Mess"

Mrs. Gorsuch has justified these cuts on the grounds that the Agency she inherited was a mess, a management "chaos." Even if this were true, it's not obvious that radical amputation is the right prescription. In any case, it's not true.

Despite its disproportionate and constantly growing load, EPA works. There is less sulfur in the air, and America's long-fouled rivers are recovering. For the first time in generations, for example, salmon have found it possible to return to the Connecticut River.

In fact EPA has worked very well indeed. True, some of its programs need reform. True, it has used crude regulatory tools. Certainly its job is inherently unpopular. Nonetheless, it has been widely recognized as one of the best public agencies we have.

- No Department had more of its civil servants receive the President's top performance awards than EPA, a relatively small organization.

- According to the Wall Street Journal, it is one of only two public agencies that used to draw significant numbers of applicants from the leading business schools (even though it can pay only 50-60 percent the average graduate's salary).

- Except for the deregulation of the airline and trucking industries, almost all the major improvements in how government regulates have originated at and first been demonstrated by EPA--be it learning how practically to measure costs or benefits, the bubble,or charging those who don't comply a penalty just big enough to make continued noncompliance economically unattractive.

- It and NASA were the leaders on civil service reform. It led in budget reform.
- As the comparative workload charts we reviewed earlier demonstrate, its workers are exceptionally productive.

Congress has paid it its ultimate compliment by charging it with difficult new tasks year after year.

* * * * *

If Congress wants its environmental statutes implemented, it should:

(1) Reject these cuts in the Agency core operating programs. Instead these programs should be increased sharply. (Holding resources constant in the face of a doubling workload is a de facto 50 percent cut.)

(2) If essential, take any cuts absolutely required of EPA from the wastewater treatment construction grants program's remaining $2.4 billion. A 20 percent cut here could restore almost all the devastating proposed operating cuts. Far better to forego or delay one large treatment plant than the nation's environmental research program, a small plant than what Mrs. Gorsuch proposes cutting from the enforcement program.*

To the degree that Congress can't fund its environmental laws, it should repeal or delay them. The alternative is

(1) to require citizens to comply with unimplemented laws, i.e. to cause a quick breakdown of voluntary compliance; and

(2) to destroy our environmental institutions, state as well as federal, through the combined effects of quick, radical cutbacks and of also requiring them to do the impossible.

Both results will before long expose business and the public to the worst sort of wasteful, unintelligent regulation by a basket case agency. When the public reacts to worsening environmental conditions, and the President and Congress turns to EPA to act, the likely consequences, in the words of Chemical Week, are "scary".

Russell Train, EPA Administrator under Presidents Nixon and Ford and a man who understands EPA's programs intimately, evaluates the situation in much the same way:

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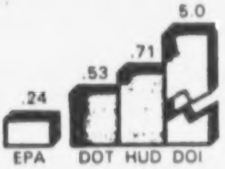
* The Administration eliminated wastewater treatment construction grants from the FY 82 budget entirely, and proposes to restore 65 percent in nominal dollars in FY 83. In real dollars, that is only enough to cover 20 percent of the need identified by President Ford. How is society to pay for the other 80 percent? I certainly do not advocate this cut, which I view as a transfer of public investment to private consumption.

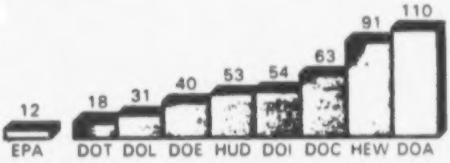
> As one who served two Republican administrations from 1969 to 1977 and who voted for President Reagan, I must record my profound concern over what is happening at EPA today. The budget and personnel cuts, unless reversed, will destroy the agency as an effective institution for many years to come. Environmental protection statutes may remain in full force on the books, but the agency charged with their implementation will be a paper tiger. ("The Destruction of EPA" by Russell E. Train. The Washington Post, February 2, 1982.)

Poll after poll demonstrates that the public urgently wants the protection Congress charged EPA with providing. Congress must act strongly and now to protect EPA if it wants that job done.

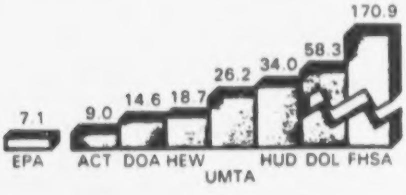
EPA Has Had More Work per Worker Than Other Agencies



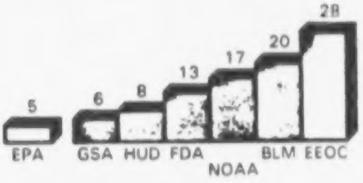
EPA Has Fewer Positions per $M Construction Outlay



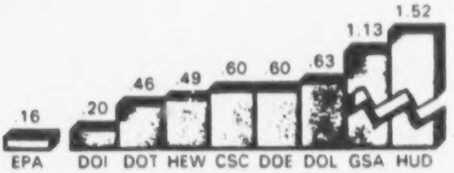
EPA Has Fewer Lawyers per Significant Regulation



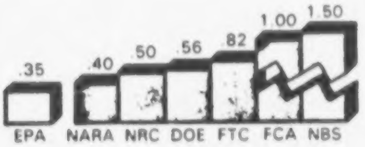
EPA Has Fewer Auditors per 1000 Grantees



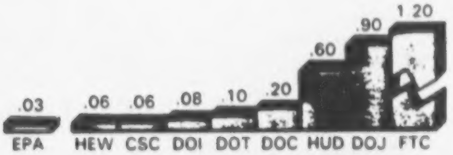
EPA Has the Least Administrative Management per 100 Employees



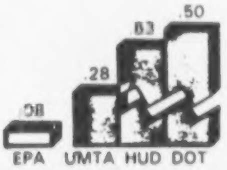
EPA Has The Smallest Percentage of Management and Operation Staff



EPA Has Smallest Percentage of Library/Information Staff per Professional User



EPA Has Fewer Evaluation Dollars as a Percent of Operating Budget



EPA Has Fewer Positions per Active Construction Project

* Source: U.S. EPA budget submission, 1981, based on studies by the Office of Management and Budget, the Office of Personnel Management, independent contractors, and EPA

Comprehensive Budget Summaries

EPA Programs: Needs vs. Reagan Budget

	1981 Budget		Actual FY 83 Needs		Reagan Gorsuch FY 83 Budget	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
OPERATING BUDGET						
Hazardous Waste[1]	992	138.872 7	2.386 8	346.838 9	661 3	111.308 5
Toxic Chemicals	775	109.904 1	1.775 1	255.112 1	641 5	72.440 7
Clean Water[1]	2.735	319.076 4	3.446 6	408.784 8	1.827 0	188.277 0
Clean Air	1.932	255.705 1	2.763 8	426.888 2	1.355 0	197.448 8
Pesticides	925	75.943 2	1.237 3	116.674 0	669 6	80.620 6
Other[2]	1.473	237.772 7	1.228 1	313.700 5	1.066 1	146.085 6
Management	2.575	214.802 0	3.711 2	310.760 0	2.178 3	208.479 1
Total Operating	11.407	1.352.876.2	16.548 9	2.178.748 5	8.399 0	874.660 3
Superfund	142	78.000 0	965 0	890.000 0	554 6	275.000 0
Construction Grants		3.304.837 0				2.400.000 0

[1] For comparison purposes, the hazardous waste and water quality figures have been adjusted to reflect such things as the subsequent expiration of the conventional solid waste program, the transfer of spill response duties from the water office to the new Office of Solid Waste and Emergency Response, and other minor adjustments

[2] Contains drinking water, radiation, noise, and other minor programs, plus certain special items (such as the conventional solid waste program) that have been subtracted from the hazardous waste and water quality media for comparison purposes (see footnote #1)

Managing Hazardous Wastes

	Authorized FY 81		Actual FY 83 Needs		Reagan/Gorsuch FY 83	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
Research & Development						
Intramural		4.401 7		32.547 1		11.329 9
Extramural		28.072 7		77.452 9		19.966 4
Total	88 4	32.474 4	280 0	100.000 0	139 5	31.296 3
Abatement and Control						
Intramural		33.705 5		74.025 9		20.884 4
Extramural		38.917 0		56.145 9		18.789 5
Total	820 3	72.622 5	1.460 8	102.755 0	475 7	39.673 9
Enforcement						
Intramural		3.143 6		27.325 3		1.795 6
Extramural		632 2		2.194 8		–
Total	83 0	3.775 8	700 0	29.520 1	46 1*	1.795 6
State Grants						
Total	–	30.000 0	–	87.147 0	–	38.542 7
Total Program						
Intramural		41.250 8		123.898 3		34.009 9
Extramural		97.621 9		222.940 6		77.298 6
Grand Total	991 7	138.872 7	2.386 8	346.838 9	661 3	111.308 5

* Includes the water program's environmental emergency response program, now under the control of the Assistant Administrator for Solid Waste and Conservation Resource

Controlling Toxic Chemicals

	Authorized FY 81		Actual FY 83 Needs		Reagan/Gorsuch FY 83	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
Research & Development						
Intramural		11,838.3		29,707.7		14,617.2
Extramural		28,673.4		56,520.1		15,295.3
Total	187.1	40,511.7	349.4	86,227.8	171.9	29,912.5
Abatement and Control						
Intramural		20,481.7		44,715.0		17,314.9
Extramural		43,734.8		76,712.5		22,396.0
Total	502.1	64,216.5	991.6	121,427.5	401.1	39,710.9
Enforcement						
Intramural		2,695.1		18,199.3		2,817.3
Extramural		1,480.8		1,936.5		0.0
Total	86.2	4,175.9	427.0	20,135.8	68.8	2,817.3
State Grants						
Total	–	1,000.0	7.1	40,126.7	7.0	0.0
Total Program						
Intramural		35,015.1		92,622.0		34,749.4
Extramural		74,889.0		162,490.1		37,691.3
Grand Total	775.4	109,904.1	1,775.1	255,112.1	641.5	72,440.7

Protecting Water Quality

	Authorized FY 81		Actual FY 83 Needs		Reagan/Gorsuch FY 83	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
Research & Development						
Intramural		25,665.5		31,441.6		18,708.9
Extramural		38,361.8		45,892.7		9,605.0
Total	494.3	64,027.3	511.0	77,334.3	296.3	28,313.9
Abatement and Control						
Intramural		54,174.9		68,092.4		53,572.6
Extramural		70,843.5		49,575.5		37,126.3
Total	1,487.6	125,018.4	1,483.6	117,667.9	1,037.8	90,698.9
Enforcement						
Intramural		24,764.8		55,036.3		19,797.4
Extramural		9,835.9		15,782.6		3,386.8
Total	752.9	34,600.7	1,452.0	70,818.9	492.9	23,184.2
State Grants						
Total		96,230.0		142,963.7		46,080.0
Total Program						
Intramural		104,605.2		154,570.3		92,078.9
Extramural		215,271.2		254,214.5		96,198.1
Grand Total	2,734.8	319,876.4	3,446.6	408,784.8	1,827.0	188,277.0

Ensuring Clean Air

	Authorized FY 81		Actual FY 83 Needs		Reagan/Gorsuch FY 83	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
Research & Development						
Intramural		28,855.6		39,335.0		24,134.7
Extramural		45,587.7		69,745.0		26,253.0
Total	451.8	74,443.3	501.6	109,080.0	308.5	50,387.7
Abatement and Control						
Intramural		34,671.7		58,751.0		13,703.6
Extramural		27,208.8		33,127.7		15,930.6
Total	890.6	61,880.7	1,357.9	91,878.7	701.2	47,634.2
Enforcement						
Intramural		18,045.3		34,349.0		13,563.5
Extramural		13,663.0		18,145.7		6,915.6
Total	589.4	31,708.3	904.3	52,494.7	345.3	20,479.1
State Grants						
Total		87,673.0		173,434.8		78,987.8
Total Program						
Intramural		81,572.6		132,435.0		69,401.8
Extramural		174,132.5		294,453.2		128,087.0
Grand Total	1,931.8	255,705.1	2,763.8	426,888.2	1,355.0	197,488.8

Protecting Agaist Pesticides

	Authorized FY 81		Actual FY 83 Needs		Reagan/Gorsuch FY 83	
	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)	Permanent Positions	Dollars (000)
Research & Development						
Intramural		6,136.4		6,445.3		3,983.2
Extramural		3,897.7		4,510.5		1,987.2
Total	114.1	10,034.1	114.1	10,955.8	67.5	5,970.4
Abatement and Control						
Intramural		22,275.3		37,713.8		20,903.0
Extramural		28,260.6		46,891.0		11,570.7
Total	673.2	50,285.7	937.8	84,604.3	505.7	32,473.7
Enforcement						
Intramural		3,907.8		5,840.8		3,212.8
Extramural		111.6		2,180.8		45.3
Total	121.4	4,019.4	169.3	8,021.6	96.6	3,258.1
State Grants						
Intramural		433.8		455.0		
Extramural		10,920.0		12,636.8		
Total	16.1	11,353.8	16.1	13,091.8		8,918.4
Total Program						
Intramural		32,753.3		50,454.9		28,099.0
Extramural		43,189.9		66,219.1		22,521.6
Grand Total	924.9	75,943.2	1,237.3	116,674.0	669.8	50,620.6

HEARING SCHEDULE

Senator Leahy. I might say, Mr. Chairman, that I am going to have to be leaving at this point. But I want to compliment the chairman of this subcommittee for putting together a very significant hearing record. I should also compliment the chairman for his consideration of the requests made by other members of the committee to acknowledge those. My requests of witnesses and testimony have all been answered fully and completely. I think it has been an even and balanced set of hearings. I think with the witnesses that you have put together it will give one of the most balanced presentations on a very difficult question, and I compliment you for it.

Senator Garn. I thank the Senator. I feel very strongly that people have the right to be heard, particularly here in Washington. Whether I happen to agree with them or not, they have a right to be heard and express their feelings on the issues that are important to them.

Senator Leahy. I think in my years of serving with the chairman on the Appropriations Committee and various subcommittees, I have never seen a time when the chairman hasn't been willing to have people come forward, be heard, whether or not he agrees with that particular position, not only on this subject but on a host of other subjects, and I compliment him.

Senator Garn. Sometimes they even convince me.

Next may I call to the witness table Mr. Spencer Manthorpe, member of the board of directors of the United Cerebral Palsy of Delaware County, Pa.

Department of Housing and Urban Development

STATEMENT OF SPENCER A. MANTHORPE, ESQ., MEMBER, BOARD OF DIRECTORS, UNITED CEREBRAL PALSY OF DELAWARE COUNTY, PA.

ACCOMPANIED BY E. CLARKE ROSS, DIRECTOR, GOVERNMENTAL ACTIVITIES OFFICE, UNITED CEREBRAL PALSY ASSOCIATION, INC.

LETTER FROM SENATOR SPECTER

Senator Garn. While you are coming up, I would like to read a letter addressed to me:

> I am very sorry that I will not be able to be present at 11 a.m. tomorrow to hear the testimony of Mr. Spencer A. Manthorpe, a Philadelphia attorney who will be testifying on behalf of the developmentally disabled task force on housing.
>
> Mr. Manthorpe is a member of the Philadelphia law firm of Hepburn, Willcox, Hamilton & Putnam. He graduated from Lafayette College in Easton, Pa., and the University of Pennsylvania Law School. He is past president of United Cerebral Palsy of Delaware County, past president of United Cerebral Palsy of Pennsylvania, and a member of the governmental activities committee of United Cerebral Palsy Associations, Inc.

This is from Senator Arlen Specter.

SECTION 202 PROGRAM

Mr. MANTHORPE. Thank you, Senator. I appreciate the opportunity to be heard this morning. With me is Dr. Clarke Ross of the United Cerebral Palsy Washington office, who has vast expertise in the field, and if I can't handle a question I am sure he can.

As indicated, we are representing the Task Force on Housing of the Consortium Concerned with the Developmentally Disabled. Our interest before you this morning is involved in the HUD appropriation for section 202.

As we have indicated in our statement, we have three recommendations.

Our first is to endorse appropriations for 20,000 units under the HUD section 202 program. While we recognize the House Banking Committee has authorized or recommended 16,700 units and the Senate Banking Committee has recommended only 15,000 units, we hope to emphasize today that we have a greater need, and the need we recommend is 20,000 units. In recommending those unit, we assume that the minimum set asides for the nonelderly handicapped which have been in place for the last 5 years will continue.

SECTION 8 PROGRAM

Our second recommendation is that we endorse adequate section 8 subsidies for the housing units which we are recommending.

And third—and these are all on the first page of our statement—we request the reauthorization for fiscal year 1983 of $10 million for congregate housing.

NEED FOR HOUSING UNITS

Why do we recommend these number of units? We did a survey of UCPA affiliates. We surveyed only 61 of those units. In those units we found 1,122 adults who are inappropriately housed. Now when we say "inappropriately housed," we set forth the statistics of those people and the reasons we find them inappropriately housed in the first part of our statement. Some of those are: Lack of rent subsidies; lack of appropriate community housing locations, which is section 202, or congregate housing; lack of attendant care; lack of support services; lack of accessible housing units; and lack of financing of needed public services.

Now probably one of the reasons section 202 has become more important is the deinstitutionalization. This is a buzz word, but it means what it says, that more and more of our nonelderly handicapped, disabled people are being taken out of the institution. Some of this is done, as you probably well know, by court decree, and a lot of it is being done just because it is better for them. Deinstitutionalization, of course, creates a housing demand outside of the institution. Our success in deinstitutionalization has raised that demand to the point where section 202 and congregate housing is becoming more important, although it is apparently less important under the budget. Such deinstitutionalization will probably grind to a halt, if not recede, if we are not able to find adequate housing outside the institution for these persons.

Further on in our statement, we also talk about the chronically mentally ill and the deinstitutionalization with these people. They also need section 202 housing. The State mental health program directors estimate there are 200,000 of these chronically mentally ill persons who are inappropriately housed at this time.

We set forth also the demand factor as shown by HUD for these units. In fiscal year 1981, there were 5,228 units requested for the nonelderly handicapped. There were 1,700 of those units which were approved and received by the nonelderly handicapped. So, as you can see, there is quite a number of units necessary that are not being supplied.

The reason why we are emphasizing the use of HUD 202 funds for these units and section 8 subsidies is because of the cost factor. Last year we pointed out to this committee the comparisons between institutionalization in the States and community housing in HUD 202 type housing. And at that time we showed quite clearly that it was cheaper to house these people in section 202 housing than it was in institutions. This year we compare in our statement medicaid ICF/MR housing versus section 202 housing. In that comparison we took two of our United Cerebral Palsy affiliates, and we took them because they had the kind of persons in their housing that would make a good mix for this kind of thing, and we compared ICF/MR housing with the group home cost, either section 202 or congregate-type housing, and you can see in our statement the vast difference between the two types of housing. So not only is group housing more appropriate, but it is cheaper.

Now our purpose here today has been to demonstrate the importance that the programs that we have in effect today and we wish to have in effect for disabled persons and their ability to live outside in the community. It is our hope that Congress will continue to appropriate an adequate amount of funds to realistically meet these demands.

I would be glad to answer any questions you might have in connection with our proposal.

Senator GARN. Thank you very much. We appreciate your testimony.

I am sorry we have such limited time, but with 60 witnesses in 2 days on a variety of subjects, there simply isn't enough time.

I would like you to be aware, and I am sure you are, that the subcommittee did recommend an additional 6,000 units for the section 202 program in the urgent supplemental which we hope will be considered by the Senate this afternoon. As a former mayor, I am well aware of the need for the section 202 program. I have supported it in the past. I am sure you are also aware I have overall budget constraints that are difficult, and you have to start making those choices within that overall ceiling. However, we did put an additional 6,000 units for the section 202 program in the recommendation from the subcommittee into the urgent supplemental.

Thank you very much for your testimony.

Mr. MANTHORPE. Thank you.

[The statement follows:]

STATEMENT OF SPENCER A. MANTHORPE, MEMBER, BOARD OF DIRECTORS, UNITED CEREBRAL PALSY OF DELAWARE COUNTY, PA., AND UCP OF PENNSYLVANIA

- CCDD Witness

Representing the Consortium Concerned with the Developmentally Disabled (CCDD) Task Force on Housing is Spencer A. Manthorpe, Esq. Mr. Manthorpe is Past President of both United Cerebral Palsy of Delaware County and UCP of Pennsylvania and currently serves on both boards of directors. He also currently is the Mideast District representative on the UCPA national governmental activities committee. He practices law in Philadelphia. Mr. Manthorpe's severely disabled daughter with cerebral palsy died at the age of 15.

- CCDD Recommendations

The CCDD endorses the following recommendations previously made by others:

1) We endorse appropriations adequate for the production of 20,000 units of housing under the HUD Section 202 program as proposed by the Ad Hoc Coalition for Housing for the Elderly, the White House Conference on Aging, and the American Association of Homes for the Aging. The Congressional Budget Office has estimated that the 20,000 unit figure translates into a loan authority of $1.1 billion. The 20,000 unit figure is also included in S. 2404 and H.R. 6160, bills by Senator John Heinz and Representative Edward Roybal to amend and extend the Section 202 program.

It is our understanding that the House Banking Committee, in marking up its Housing and Community Development Act amendments has approved 16,000 units of Section 202 housing while the Senate Subcommittee on Housing has tentatively approved 15,000 units. This compares to last year's $830.8 million loan authority and 14,728 units of Section 202 housing.

We expect that the minimum set-asides for the nonelderly handicapped projects used during the past five years will continue.

2) We endorse an adequate Section 8 rent subsidy set-aside authority to finance up to 20,000 units of Section 202 housing.

3) We bring to the Subcommittee's attention that both S. 2404 and H.R. 6160 reauthorize the Congregate Housing Services program at a level of $10 million in FY 1983. We understand the House Banking Committee has included this authority in its marked-up Housing and Community Development amendments. These funds were rescended in FY 1981 and were not available in FY 1982 but were available in both Fiscal Years 1979 and 1980. We encourage the Appropriations Committee to appropriate $10 million for the Congregate Housing Services Program assuming enactment of its reauthorization.

- CCDD Assumptions

This statement is based on a number of policy assumptions:

1) Housing assistance for the developmentally disabled person is a legitimate responsibility of both the federal government and the Department of Housing and Urban Development (HUD).

2) Without guaranteed federal subsidy programs, the possibility of institutionalization is greatly enhanced.

3) HUD should promote and reinforce the role of the nonprofit sector as a cost beneficial approach to providing appropriate community housing.

- Housing Demand Factor: Inappropriately Housed Disabled Persons

United Cerebral Palsy Associations, Inc. recently surveyed 61 of its 256 affiliates seeking housing data. The 27 respondents provided the following information related to available housing.

1) Adults with disabilities assisted by UCPA affiliates (27) currently residing in appropriate housing settings...........1,762

   a) Of these, 867 are wheelchair users.
   b) Of these, 916 require physical adaptations to their building and living unit.
   c) Of these, 1,177 require supportive services.
   d) Of these, 786 require attendant care.
   e) Of these, 352 reside alone.
   f) Of these, 697 reside with other persons with disabilities.
   g) Of these, 328 reside with their natural family members.

2) Adults with disabilities assisted by UCPA affiliates (27) currently residing in inappropriate housing settings 1,122

   a) Of these, 646 are wheelchair users.
   b) Of these, 407 require physical adaptations to their building and living unit.
   c) Of these, 879 require supportive services.
   d) Of these, 817 require attendant care.
   e) Of these, 2 reside alone.
   f) Of these, 612 reside with other persons with disabilities.
   g) Of these, 85 reside in state institutions for the mentally retarded or mentally ill.
   h) Of these, 133 reside in nursing homes.
   i) Of these, 497 reside in intermediate care facilities.
   j) Of these, 326 reside with family members.

      1) Of these, 255 disabled adults share the affiliate's assessment that their housing is inadequate.

      2) Of these, 130 family members share the affiliate's assessment that their housing is inadequate.

3) The following items are reasons that the 1,122 disabled adults reside in inappropriate housing settings:

a)	Lack of rent subsidies	16
b)	Lack of appropriate community housing locations	16
c)	Lack of attendant care	16
d)	Lack of support services	15
e)	Lack of accessible housing units	13
f)	Lack of public financing of needed services	13
g)	Lack of transportation	12
h)	Lack of cooperation by state and local government	8

These findings reinforce the need for the Section 202 program, federal rent subsidies, and the Congregare Housing Services program.

- Housing Demand Factor: Deinstitutionalization of the Mentally Retarded and Developmentally Disabled

Dr. Richard C. Scheerenberger, president, National Association of Superintendents of Public Residential Facilities, has estimated the rate of deinstitutionalization for the mentally retarded and developmentally disabled between 1972-1978 at 9.4%. This rate, which involves roughly 11,000 people annually, held constant at about 9% for each of the six years involved. He estimates that 50% of these persons have been placed in skilled nursing facilities or smaller institutions, 30% in group homes or intermediate care facilities, and 20% in foster homes, natural homes, or apartment programs. Without adequate financing of the Sections 202 and 8 programs and without adequate support services such as the Congregate Housing Services program, deinstitutionalization may stop. Additionally, with massive government cutbacks comes the possibility of reinstitutionalization.

- Housing Demand Factor: The Chronically Mentally Ill

For chronically mentally ill persons suffering from unnecessary hospitalization the lack of adequate housing is the major barrier to returning these people to a more normal level of functioning in the community. Since the establishment of the Section 202 for the handicapped, there has been some question whether the chronically mentally ill are an eligible handicapped group for the program.

In 1978 Congress clarified this issue in conference report language contained in the "Housing and Community Development Act Amendments of 1978" (P.L. 95-557). The report stated that the chronically mentally ill should not be excluded from the program (as was HUD's policy) and that HUD should make provisions to include the chronically mentally ill in the 202 program. From FY 1978-1980 $65 million was set aside in Section 202 funds, together with $13 million in Section 8 rent supplements, in a demonstration program designed to bring the chronically mentally ill into the regular 202 program. This program has been operated in conjunction with the Health Care Financing Administration.

However, when HUD ceased funding for the demonstration in FY 1981, it failed to make the chronically mentally ill eligible for the regular Section 202 program. In April 1982, HUD finally included the chronically mentally ill in the Section 202 program, in time for 1982 funding round. We are grateful for the support of Congress in opening up Section 202 for the chronically mentally ill and urge this committee to continue its support for the FY '83 funding.

The National Association of State Mental Health Program Directors estimates there are over 200,000 chronically mentally ill persons inadequately or inappropriately housed who could benefit from Section 202-type housing services. With the assistance of the Section 202 program this nation has begun making available to the chronically mentally ill, housing patterns and conditions of every day life which are as close as possible to the norms and patterns of the mainstream of society.

- Housing Demand Factor: HUD Section 202 Applications and Awards

	Comparison Criteria	FY 1979	FY 1980	FY 1981
1)	Applications from nonelderly handicapped sponsors	201	200	256
2)	Number of approved applications	116	103	98
3)	Requested number of units for the nonelderly handicapped	4,423	7,407	5,228
4)	Number of approved units	2,217	1,900	1,693
5)	Approved units of nonelderly handicapped housing as a percent of total Section 202 approved units	11%	10.5%	11.4%

- Cost Factor Arguments: Institutional vs Community and Medicaid vs HUD Section 202/8 Comparisons

Last year, our testimony to this subcommittee focused on comparisons of the costs of state institutions for the mentally retarded and developmentally disabled with other less restrictive, more community based living arrangements. The community based residences, in every case, involved substantially less cost. This statement will not repeat these examples and data.

Many states are developing residential programs using the financing authority contained in the Medicaid Intermediate Care Facilities for the Mentally Retarded (ICFs/MR) section of Title XIX of the Social Security Act. Medicaid is a federal-state partnership and is the subject of current negotiations between the White House and the states regarding "New Federalism." Thus, the federal government, through both Medicaid and HUD Section 202/8 is financing residential programs for the developmentally disabled.

Below is a comparison of ICF/MR and group home operating costs in situations where both facilities are administered by the same sponsoring agency.

Sponsoring Agency	ICF/MR Cost	Group Home Cost
United Cerebral Palsy of Columbus and Franklin Counties, Columbus, Ohio	$56.26*	$27.70* and $47.20*

*All residents of the three facilities are mentally retarded and wheelchair users are equally divided between the two settings (18 in each). There are 16 ambulatory residents in the ICF/MR and 6 in the group homes. The services provided in both settings are very similar.

Sponsoring Agency	ICF/MR Cost	Group Home Cost
United Cerebral Palsy Association of King and Snohomish Counties, Seattle, Washington	$52.84*	$19.00*

* The ICF/MR includes 97 non-retarded and 13 mentally retarded residents; all group home residents are non-retarded. In the ICF/MR, there are 89 wheelchair users and 21 ambulatory residents; in the group home, there are 6 of each. The ICF/MR includes a full range of specialized therapies and living skills training while the group homes are focused on community integration training.

- Conclusion

Our statement has attempted to identify the important role played by HUD in supporting community based housing for persons with disabilities, to document the continuing demand for housing assistance faced by persons with disabilities, and to make several observations regarding cost items associated with federal financing of residential programs for persons with disabilities. It is our hope that Congress will continue to appropriate an adequate amount of funds to realistically meet some of the housing demands documented in our statement.

- Association for Retarded Citizens
- Epilepsy Foundation of America
- National Association of Private Residential Facilities for the Mentally Retarded
- National Association of State Mental Health Program Directors
- National Association of State Mental Retardation Program Directors
- National Easter Seal Society
- National Society for Autistic Children and Adults
- United Cerebral Palsy Associations, Inc.

STATEMENT OF WILLARD GOURLEY, PRESIDENT, FIRST ATLANTIC CORP., ON BEHALF OF THE MORTGAGE BANKERS ASSOCIATION OF AMERICA

ACCOMPANIED BY:

BURTON WOOD, LEGISLATIVE COUNSEL, MORTGAGE BANKERS ASSOCIATION OF AMERICA

SHARON CANAVAN, ASSOCIATE LEGISLATIVE COUNSEL

Senator GARN. Next I would like to call Mr. Willard Gourley, president of First Atlantic Corp.

Mr. GOURLEY. Good morning. My name is Willard Gourley. I am president of First Atlantic Corp., located in Charlotte, N.C., and I also serve as chairman of the legislative committee of the Mortgage Bankers Association of America. Mortgage bankers are a principal source of residential mortgage credit, providing between 20 to 25 percent of single-family mortgages in this country in recent years. With me today are Burton Wood, MBA's legislative counsel, and Sharon Canavan, our associate legislative counsel.

Senator GARN. Let me interrupt long enough to apologize to Mr. Joseph Laden. I am getting to advanced middle age and I skipped one on the list. However, now that we are at this place in the hearing schedule, we will go ahead.

Mr. GOURLEY. I was back there getting my speech ready. You surprised me.

Senator GARN. Well, I flipped the page and I surprised myself.

Mr. GOURLEY. I would yield to him if he needs to leave.

Senator GARN. No, as long as you are here. He looks comfortable back there.

Mr. GOURLEY. I would like to say I strongly agree with Senator Leahy's comments about you. As you said, sometimes we have been able to convince you about housing. Sometimes you have convinced us. You certainly listen to us fairly, and we thank you very much for that.

INTEREST RATES

As we all know, this Nation is facing an economic crisis today. The sustained high interest rates of the last 3 years have all but destroyed our interest-rate-sensitive industries—particularly housing, real estate financing in general, automobiles, and agriculture. Measures must be taken quickly to strengthen these industries upon which our economy relies so heavily. Housing has led the economy out of the last seven recessions, and I believe that if Congress acts to cut the deficits, and does so soon, that will transmit the proper signal to the financial markets, interest rates will come down, and we can get industry back to work.

However, we should not forsake the important goal of providing suitable housing for Americans, particularly with the challenge of the 1980's that looms ahead—housing the large baby boom population that is poised for homeownership whenever interest rates abate—and I am assuming that they will abate. Rather, we must act to help make that dream affordable again.

FHA AND GNMA PROGRAMS

The nonsubsidized, user-fee-supported programs of the Federal Housing Administration and the GNMA should not be cut back or subjected to restrictive ceilings. I urge this subcommittee to set the limits on FHA at the fiscal year 1982 level of $40 billion for fiscal year 1983, which are also set forth in the 1982 housing proposal. The GNMA guaranty program for mortgage-backed securities is equally, if not more, important. It serves as the vehicle now to delivery both FHA and VA loans to the capital markets, thus insuring adequate sources of investment for mortgage finance. Again, I urge adoption of the ceilings established for fiscal year 1982 for GNMA. These programs are particularly crucial to potential home-buyers in today's markets, because the thrift institutions, which formerly originated and held a large proportion of mortgages, are either not making mortgages or are becoming more like mortgage bankers and selling loans into the secondary mortgage market.

In addition to adequate ceilings, I urge this subcommittee to consider two procedural protections. Anti-impoundment language, similar to that adopted in the fiscal year 1982 continuing resolution, should be included to avoid the situation that developed in November 1981 when the administration unilaterally attempted to cut back on the congressionally approved credit budget limits, including a very severe cutback in the GNMA mortgage-backed securities program. Second, we urge the inclusion of language requiring HUD to notify Congress whenever it appeared that commitments under either the FHA or GNMA programs were being drawn down at such a rate as to pose the possibility of exhausting available commitment supplies. Prompt notification under such circumstances would allow Congress sufficient time to react and avoid a program moratorium.

HOUSING STIMULUS PROGRAM

I also would like to quickly summarize our views on some other housing initiatives. MBA supports a temporary and immediate housing stimulus program as a way to revive the housing industry and propel the economy out of this current recession. I think it is important to note failure to keep pace with our housing needs will potentially prove to be inflationary when demands for it increase during a major recovery period. We also encourage the House and the Senate to quickly resolve the differences in their two bills. I think we are probably getting near some resolution today. I would also like to reiterate MBA's support for multifamily rental housing production programs. In areas that have a sufficient supply of housing, a rental certificate program may be a worthwhile measure, but such a program does not provide the necessary incentive to produce additional rental units in those areas that suffer shortages. Therefore, MBA supports the provisions in the housing bill that provide for a new multifamily production program because low-income families do need help.

GNMA TANDEM PROGRAMS

Furthermore, MBA supports funding to buy out the pipeline of GNMA tandem projects that have already received commitments. Developers have expended considerable sums in the planning and preparation of these projects in reliance upon eventual funding.

We thank you for the opportunity to appear before the committee today and I would be pleased to answer any questions or provide additional information.

Senator GARN. Thank you very much.

You noted in your statement that you supported the housing stimulus program of the Senate and the House and recommended that we resolve our differences as soon as possible. What specific proposals do you support? What resolution between the two would you like to see?

Mr. GOURLEY. I would be happy if you just make a great compromise, split down the middle. I think either one of them. The main thing is to get on with it. The provisions of both are so nearly the same.

Senator GARN. Well, they are in terms of the amount. The House appropriated a billion; that is what we put in, although we authorized 5 years, which cuts the original Lugar bill from 400,000 units to 80,000. The House was originally an 80,000-unit program. Senator Lugar and I would prefer to have the entire appropriations at this time; however, it appears to us it will be very difficult regardless of what we do in the House or Senate to get any sort of program approved by the President, whether it is $1 billion or $5 billion, despite the recapture provision. So what is in the Senate version is not too different from the House version at this time, but there may be some attempt to go back to the original Lugar bill as reported out of the Banking Committee.

Mr. GOURLEY. The Lugar bill—I think we like the idea of the higher basic interest rate, subsidized down to maybe 10 or 11 percent. But we would like the idea, that is, an interest rate that is very practical, and stop it there, would be very reasonable, rather than just a wide up 4 to 6 percent, 4 percent subsidized, on the 115 percent of median income. I think that would be a little too wide open in case interest rates do drop quickly.

Senator GARN. We have another particular problem on the Senate floor with the threat of a filibuster, and we are going back to the supplemental at 2 p.m. Frankly, I have been so tied up I don't know if they have an agreement to separate some of the controversial items out of the bill. It is very possible that the housing portion may simply have to go over until after the recess.

Mr. GOURLEY. We certainly don't want to see that cut out.

Mr. WOOD. I just came from the Banking Committee and there has been no agreement at this point. And we would urge that the authorizing legislation and the appropriation go forward together. I realize the threat of filibuster there. We would hope that could be resolved by you folks.

Senator GARN. Well, we would hope it could be resolved too, for a lot of other reasons besides the housing stimulus bill. However, even if we do bring it to the floor this week, we have more than 20 amendments of various sorts against the housing programs. I feel we have done more than our share in the last 2 years of contributing to reduction in the overall Federal budget increase in this subcommittee and in the Banking Committee—as you know I wear both hats. But there is one individual who doesn't want to recognize the fact we have come a long way. And due to the rules of the Senate we could be on the bill for several days. However, there are parts of the urgent supplemental, not large parts in terms of spending, that must be passed. We will know later this afternoon if the problems have been resolved.

Mr. GOURLEY. We thank you and we appreciate your interest in this area.

Senator GARN. Thank you.

[The statement follows:]

STATEMENT OF WILLARD GOURLEY, PRESIDENT, FIRST ATLANTIC CORP.

Mr. Chairman and Members of the Subcommittee, my name is Willard Gourley. I am President of the First Atlantic Corporation located in Charlotte, North Carolina. I serve as Chairman of the Legislative Committee of the Mortgage Bankers Association of America.* MBA is the trade association of the Nation's mortgage banking and real estate finance industry. Accompanying me today are Burton C. Wood, MBA's Legislative Counsel, and Sharon M. Canavan, MBA's Associate Legislative Counsel.

We appreciate the opportunity to appear before you today to testify on the appropriations for FY 1983 for the Department of Housing and Urban Development (HUD). Our comments will focus on the necessity for establishing sufficiently high credit budget limitations for the non-subsidized, user-fee supported Federal Housing Administration (FHA) mortgage insurance and Government National Mortgage Association (GNMA) Mortgage-Backed Security (MBS) guaranty programs. We will also comment briefly on other funding proposals contained in the 1982 Housing authorization bills presently before the House and Senate.

ECONOMIC OUTLOOK

This Nation is facing an economic crisis today. The crisis is one of conflict between fiscal and monetary policies. The result is exploding government deficits crowding out private spending and causing record high interest rates. High interest rates have been slowly destroying our interest-rate sensitive industries, especially in the housing field. Recognizing the need for action, MBA and five other major trade associations recently issued the following joint letter to the President and the Congress, urging that swift, bipartisan action be taken to reduce projected Federal government deficits:

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*The Mortgage Bankers Association of America is a nationwide organization devoted exclusively to the field of mortgage and real estate finance. MBA's membership comprises mortgage originators, mortgage investors, and a variety of industry related firms. Mortgage banking firms, which make up the largest portion of the total membership, engage directly in originating, financing, selling, and servicing real estate investment portfolios. Members include:

- Mortgage Banking Companies
- Mortgage Insurance Companies
- Life Insurance Companies
- Commercial Banks
- Mutual Savings Banks
- Savings and Loan Associations
- Pension Funds
- Mortgage Brokers
- Title Companies
- State Housing Agencies
- Investment Bankers
- Real Estate Investment Trusts

MBA headquarters is located at 1125 15th Street, N.W., Washington, D.C. 20005; Telephone: (202) 861-6500.

An Open Letter to President Reagan and Members of Congress

March 3, 1982

Prolonged high interest rates are creating an economic and financial crisis in this country. In order to bring interest rates down, immediate action must be taken to reduce massive federal budget deficits. More than anything else, it is the spectre of an overwhelming volume of deficit financing which haunts housing and financial markets and poses the threat of economic and financial conditions not seen since the 1930s.

Given these circumstances, there is no alternative to: (1) slowing down all spending, not excluding defense and entitlement programs; and, if necessary, (2) deferring previously enacted tax reductions or increasing taxes. In order to have the necessary impact on financial markets, these actions should be taken prior to any increase in the ceiling on the federal debt.

Even with these actions, the restoration of financial stability and safety will be a prolonged process. It is necessary, therefore, to adopt immediate but temporary measures to address the critical problems of the industries which finance, market and produce housing for American families. These industries have unfairly borne the brunt of destructively high interest rates. Unless immediate and effective short-run measures are adopted, the continued devastation of these industries will, directly and indirectly, aggravate the federal budget deficit and greatly increase the prospect of a general economic and financial crisis.

In times of past crises in this nation, our political leaders have come together in a bipartisan manner to develop effective solutions in the common interest. Our nation is at such a time now. There will be no political winners if the Administration and the Congress fail to accommodate differences and cooperate in dealing with current serious economic problems. The threat to our nation demands prompt, effective and bipartisan action.

Llewellyn Jenkins, President
American Bankers Association

Robert R. Masterton
Robert R. Masterton, Chairman
National Association of Mutual Savings Banks

James F. Aylward, President
Mortgage Bankers Association

Julio S. Laguarta, President
National Association of Realtors

Fred Napolitano, President
National Association of Home Builders

Roy G. Green, Chairman
U.S. League of Savings Associations

Joint Statement of: American Bankers Association, Mortgage Bankers Association of America, National Association of Home Builders, National Association of Mutual Savings Banks, National Association of Realtors, U.S. League of Savings Associations

The inflation problem of the 1970s required restrictive monetary policy. This policy, followed since October 1979, has been costly, but is producing positive results. Now that inflation is coming under control, the Federal Reserve could consider easing its policy.

However, excessively expansionary fiscal policy is forcing the Federal Reserve to keep monetary policy tight to avoid a resurgence of inflation.

The current conflict between a tight monetary policy and an expansionary fiscal policy has resulted in: 1) historically high rates of interest; 2) continued recession and risk of stalled recovery; 3) high unemployment; and 4) devastation of key industries heavily dependent on credit—especially housing, automobiles, and agriculture.

The current recession is, in part, responsible for this year's Federal government budget deficit. In normal times, the end of a recession would reduce the deficit as tax revenues increase with rising profits and incomes, and as government transfer payments for unemployment and other assistance fall. The primary problem of the current deficit, though, is that it will grow and not shrink as the economy begins to recover. That is, the scheduled tax cuts and defense and entitlement spending increases will more than offset any increased tax revenues from increased profits and incomes and other spending reductions. This expansionary fiscal policy would generate new inflationary pressures, if it were not for the restrictive monetary policy adopted by the Federal Reserve. While the restrictive monetary policy is successfully bringing inflation under control, it also causes record high interest rates. It is these high interest rates that have caused the current recession, imposing high costs on the economy in terms of slow or no growth, high unemployment, and low utilization of our productive capacity.

So long as tight monetary policy keeps interest rates at or near record high levels, it will continue the gradual destruction of interest-rate sensitive industries, such as housing, agriculture, automobiles, and other consumer durables. Soon the effects will hit public utilities, manufacturing, and other sectors heavily dependent on borrowed capital.

Federal Reserve Board Chairman Paul Volcker has testified that only a more restrictive fiscal policy can permit a relaxation of monetary policy and lower interest rates. In order to achieve a sustainable economic recovery this year, Congress and the Administration must reduce fiscal pressures by reducing the deficit, beginning in FY 1983. This reconciliation of fiscal and monetary policy is the only responsible way to bring about a relaxed monetary policy, which is the only way to reduce interest rates.

There are, of course, two ways to reduce deficits—reduced spending and increased tax revenue.

We believe it is imperative that the Congress carefully evaluate all government spending plans for FY 1983 through 1985, including both defense spending and in entitlement programs, including social security. Although the international situation calls for a strong defense posture, it is questionable whether our industrial base and our defense bureaucracy can efficiently spend an additional $33 billion in FY 1983. If such an increase in a short period of time exceeds our physical and managerial capacity to augment defense, then the excess dollars will be wasted or will push up prices.

An excessive increase in defense spending, in the absence of an extended recession or a national emergency, would have additional damaging effects on the economy. It would compete with the private sector for machine tools, materials, and industrial capacity at just the time when the private sector heavy goods industries will be recovering, putting upward pressure on prices in those sectors that will be passed along to consumers later on. In addition, the massive financing requirements for both defense and civilian production will put upward pressure on interest rates, at a time when government credit demands still will be high.

Defense spending also tends to be inflationary. The production of defense goods and services increases national income without increasing the stock of goods and services available for consumers to buy. The result is that consumer prices tend to be bid upward, inflating the economy. Since investors require a premium for inflation, interest rates are pushed upward as well. Unfortunately, the President's defense program, because of its massive size, will conflict with the recovery. The Congress should carefully review defense spending plans, to provide the long-term defense capabilities we need considering the limits of our productive capacity in the short term.

Deferral of a portion of the planned defense buildup offers two benefits. First, any spending deferrals for the FY 1983 budget will reduce the deficit by a like amount, reducing pressure on Federal financing. Second, deferrals will allow the needed defense projects to be more carefully planned and reviewed. As a result, less useful projects may be identified and delayed or cancelled while more promising projects that are delayed may be better administered and benefit from emerging technology.

On the entitlement side, Social Security spending is projected to grow by about $15 to $20 billion in each of the next few years. The Congress should carefully review the Social Security budget, to consider not only the financial soundness of the program, but also the level of benefits and the automatic indexing of benefits.

If spending cuts sufficient to control the deficit cannot be achieved, then tax revenue increases should be considered. However, Congress should take note of the importance of our reduced marginal income tax rates in encouraging saving and investment in the domestic economy. Any tax increases should be temporary and should be designed to minimize their potential negative impact on savings and investment.

FHA AND GNMA-MBS COMMITMENT LIMITATIONS

MBA strongly opposes the institution of limitations on the non-subsidized, user-fee supported FHA mortgage insurance and GNMA-MBS programs. The Administration recently withdrew its proposal to phase out the GNMA-MBS program over the next five fiscal years and to reduce FHA's role significantly, pending further study. Nevertheless, it is interesting to note that the Administration's FY 1983 budget request coincides with the first year figures in its initial phaseout plan. MBA believes that such a fundamental redirection of these essential mortgage finance programs is beyond the authority of the Executive, and that responsibility for the future direction and strength of these programs lies with Congress. To emasculate these programs by administrative fiat flies in the face of authorization language that clearly indicates that such a decision is within the legislative domain.[1]

"MBA suggests that the FHA and GNMA-MBS ceilings be set at the same levels as were approved for FY 1982—$40 billion for FHA and $68.25 billion for the GNMA-MBS program. The possible enactment of a housing stimulus measure promises an even more vigorous housing recovery and even greater activity in the FHA and GNMA programs, thus necessitating that FY 1983 commitment ceilings be at least as high as those approved in FY 1982. Also, the Senate Housing Subcommittee housing authorization bill, S 2361, proposes a number of alternative financing programs for both single-family and multi-

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1/ Sec. 302 (a) (2) (A) of the National Housing Act states that "The Association (GNMA) shall have succession until dissolved by Act of Congress.

family housing. These initiatives will likely spur additional interest in FHA's programs. In order to evaluate properly the potential for these experimental programs, the ceilings must be set high enough to accommodate demand under these new programs, as well as FHA's traditional fixed-rate, long term programs.

In addition, MBA suggests that flexibility and procedural safeguards are an essential ingredient of the credit budget enforcement mechanism. The Congressional Budget resolution for FY 1982 contained language expressing the sense of the Congress that the credit budget should be limited through the appropriations process. This offers Congress a sufficient opportunity to enforce the credit budget limits without procedurally restraining the ability of Congress to respond should limitations prove to be restrictive.

The full House Appropriations Committee's report on the FY 1982 HUD-Independent Agencies Appropriations law (PL 97-101) contained precautionary language, in the event that the limits on the FHA and GNMA-MBS programs were approached, which stated that "the Department (HUD) is directed to notify the Committee promptly if it appears the limitation will require a moratorium on commitments." (See H. Rpt. 97-162, p. 7). MBA supports the inclusion of stronger language in light of the Administration's efforts to reduce these programs without Congressional consultation. Congress must be notified in the event that the ceilings may be reached in order to take appropriate and timely action.

MBA suggests that the following legislative language would provide the appropriate notice without burdening the administrative agencies:

> "The Secretary shall notify Congress whenever the cumulative fiscal year commitments issued under the Federal Housing Administration mortgage insurance programs or the Government National Mortgage Association Mortgage-Backed Security program exceed a pro-rata share of the total year-to-date commitment authority during any quarter of the fiscal year. However, no limitation is imposed, by virtue of this section, on the cumulative quarterly commitments authorized to be issued by the Federal Housing Administration or the Government National Mortgage Association, except pursuant to the total commitment limitations imposed by the Appropriations Act.
>
> This notification shall be made within 30 days after the end of any quarter affected by this provision."

This language would impose a duty on the HUD Secretary and the GNMA President to report to the Congress in a timely fashion whenever it appears that the commitments issued under the FHA mortgage insurance or the GNMA-MBS guaranty programs are being drawn down at such a rate as to pose the possible danger of reaching the program commitment ceilings. Prompt notification will enable Congress to react and to avoid the possibility of program moratoria, and to react within the procedural constraints imposed by the budget and appropriations process, whenever it appears that commitments are being utilized at such a rate as to pose the possibility of running out of commitment authority before the end of the fiscal year. This section avoids imposing a blanket reporting requirement—rather, a report is required only when it appears that program usage in any quarter, on a cumulative basis, is proceeding at such a pace that commitment authority could be exhausted. Both HUD and GNMA currently have tracking systems that provide this information within at least 30 days. However, this section also makes it clear that this is not an allocation scheme to ration commitments on a quarterly basis.

Furthermore, MBA urges that anti-impoundment language be included as part of an appropriations measure. The Continuing Resolution for FY 1982, H. J Res 370, provided in Section 136 that:

> "Notwithstanding any other provision of this joint resolution, subject only to the absence of qualified applicants, and within the limits of funds and authority available, the head of each department and agency for which authority to enter into commitments to guarantee or insure is provided for in this joint resolution or H. R. 4034 (the FY 1982 HUD-Independent Agencies Appropriations law, which was signed on December 23, 1981, PL 97-101) shall enter into commitments to guarantee or insure in the full amounts provided for in this joint resolution or other applicable law. 127 Cong. Rec. H9154 (daily ed. December 10, 1981)."

This expresses a clear and incontrovertible intention on the part of Congress to set limits itself on guaranty and insurance programs—limits which cannot be reduced by administrative directive. MBA urges that language similar to that provided in Section 136 of H Res 370 be included in the FY 1983 HUD-Independent Agencies Appropriations bill, or in a Continuing Resolution, if such a measure becomes necessary.

MBA believes that reductions in the Federal deficit are necessary in order to decrease interest rates. The FHA mortgage insurance and GNMA-MBS programs, however, rely solely on private investment funds. There are no Federal dollars expended under these programs. Nor are there any ties to the Federal Financing Bank, as the private lender, not the Federal government, is responsible for marketing the GNMA securities to investors through securities dealers. To have any favorable impact whatsoever on financial markets, reductions in Federal spending must be real ones, not simply artificial reductions on paper.

Proposed reductions in the FHA mortgage insurance and GNMA-MBS guaranty commitment levels will not have an ameliorative effect on interest rates and on the financial markets. Even if marginally qualified home mortgage borrowers are rationed out of the markets, because they are unable to obtain mortgage financing at all, Federal deficit spending will soak up that reduced share. Thus, the real issues involved in these proposed reductions are whether the Federal government intends to reduce its commitment to housing and mortgage finance, by restricting programs that enhance the availability of adequate supplies of mortgage credit, especially for moderate- and middle-income families and first-time homebuyers, and whether these reductions signal an intent to reduce, overall, the share of credit that has historically been utilized in financing mortgages.

These issues are being addressed at a time when the demand for home mortgage credit has never been stronger. The Federal government, long ago, recognized the social need for, and importance of, housing its citizens, and responded in an appropriate manner by creating programs to fulfill this social goal. Not only have the non-subsidized FHA insurance and GNMA-MBS guaranty programs worked efficiently, but they have been profitable for the government. They have achieved a remarkable success in structuring a mortgage finance delivery system that provides readily available sources of mortgage credit throughout all phases of interest rate cycles, involving private sector lenders and investors to a maximum degree.

The real benefit enjoyed under these programs is not a subsidy, but the capital market efficiency of the GNMA security, and the standardization offered by the underlying FHA and VA loan instruments. The non-subsidized FHA mortgage insurance programs provide an unfailing source of private mortgage credit for low-downpayment, fixed-rate loans to homebuyers. The GNMA-MBS program ensures lenders of ready placement in the secondary market for FHA and VA loans. In effect, the existence of the GNMA-MBS program allows the individual consumer the same access to the credit markets as large corporate borrowers and the government.

The future of the mortgage finance delivery system is heavily clouded by uncertainty. The thrift industry is undergoing unprecedented difficulties, which undermine its capacity to provide long-term financing for mortgages. Fundamental changes in the future powers of all financial institutions are presently being debated in Congress, and those changes will undoubtedly alter the roles of many institutions that previously have been deeply involved in mortgage finance. As the role of these traditional mortgage finance institutions as a predominant source of mortgage credit is altered, the pivotal importance of the secondary mortgage market will increase, because of its ability to attract adequate supplies of mortgage credit from non-traditional, as well as traditional, investors. A lender, rather than having to procure an investor for every individual loan, now packages a number of loans in a mortgage pool. Investors need not consider the merits of the individual loans themselves, or even know anything about mortgages, but can rely instead on the proven track record of the GNMA security.

Not only is the role of primary lending undergoing radical changes, but the very nature of the mortgage, itself, is being altered. With the inflationary atmosphere and volatile interest rates of the recent past, investors are less willing to lock their funds into long-term, fixed-rate instruments. The proliferation of creative mortgage financing tech niques in the conventional market inhibits standardization of the underlying mortgage instruments—a feature that is essential whenever loans are to be pooled and sold in packages as securities in the secondary mortgage market.

The GNMA-MBS is one of the most significant and successful mechanisms ever devised for attracting capital for mortgage investments. MBA believes that the continued strength of the GNMA-MBS program will assist rather than impede the development of a viable conventional MBS market, because trading in the GNMA-MBS serves to establish a benchmark for the pricing of these instruments, as well as serving as a model for the development of a conventional MBS in a market that is currently undergoing radical changes. These fundamental changes inhibit the standardization that is so necessary to investor acceptance of these types of instruments, and may retard the development of an acceptable conventional MBS format.

In summary, the actuarially sound FHA mortgage insurance programs and the GNMA-MBS guaranty program were created to foster support for homeownership and assure access to the credit markets. These programs are remarkably successful at achieving these goals, at no cost to the Treasury. However, the task is not yet finished. The 1980s represent a clear challenge to the housing and mortgage finance industries to deliver adequate supplies of affordable mortgage credit to unprecedented numbers of potential homeowners. The FHA and GNMA-MBS programs will help to address those needs efficiently, unless credit budget ceilings restrict their operations. This Congress will decide whether this Nation's commitment to housing its citizens remains one of its important goals.

MBA RECOMMENDATIONS ON FY 1983 FUNDING PURSUANT TO 1982 HOUSING AUTHORIZATION PROPOSALS

Housing Stimulus Proposals

MBA has endorsed the concept of a housing stimulus program. Housing stimulus programs have been proposed by the House (HR 6294, the "Single-Family Housing Production Act of 1982" and HR 6296, the "Housing and Urban Rural Recovery Act of 1982") and the Senate (S 2226, "The Emergency Interest Reduction Payments Act of 1982"). We urge the Congress to enact speedily legislation that combines the best features of these proposals in order to revive the housing industry and propel the economy out of the current recession. We urge this Subcommittee to act favorably and provide sufficient funding to ensure that a housing stimulus program can become operative as quickly as possible.

The following are MBA's recommendations with respect to appropriations for the various programs covered by proposed 1982 housing authorization legislation, as proposed in HR 6296 reported out of the House Banking Committee and the Senate version expected to be reported out of the Senate Banking Committee shortly.

Low-Income Housing

Title III part B of HR 6296 provides $ 1.3 billion in funding authorization for FY 1983 for multi-family housing construction assistance program. MBA supports a multi-family housing production program, because many areas of this country are suffering an acute shortage of rental housing, particularly for lower-income families.

The Senate version proposes to phase-out the Section 8 program completely and replace it with a less expensive housing certificate program. MBA is opposed to any plan that contains no provision whatsoever for a multi-family housing production program. While a rental certificate program may be a worthwhile measure, particularly because of its cost saving potential, in areas that have sufficient supply of housing, it does not provide the necessary incentive to build additional multi-family rental units in those areas that suffer shortages.

Government National Mortgage Assocation

Section 206 of HR 6296 provides $1.2 billion in funding for GNMA's Special Assistance purchase authority for FY 1983. The Senate bill does not contain a similar provision. MBA strongly supports the continuation of the GNMA Tandem program beyond FY 1983. However, if Congress decides to eliminate this program, MBA believes that funding should be approved to "buy out" the pipeline of projects that have already received commitments for their projects, because developers have expended considerable sums in the planning and preparation of these projects in reliance upon eventual funding.

Prevailing financial market conditions make it impossible for conventional lenders to meet the need for affordable financing for multi-family projects serving the disadvantaged, namely low-income persons, the elderly, and the handicapped. The GNMA Tandem program helps to meet this need. MBA does not believe that exclusive reliance upon tax-exempt bonds for financing, as provided for in section 11(b) of the 1937 Housing Act will be sufficient to address that need. The need for low-income rental housing is so great and the uncertainties of the market—even the tax-exempt bond market—are so considerable that there will be a need to continue the Tandem program to provide financing either under a Section 8 new construction program or some viable alternative that would produce multi-family rental housing.

Foreclosure Assistance

MBA supports Title VI of HR 6294, which authorizes $760 million for assistance to homeowners facing foreclosure. The Senate bill does not contain a similar provision. Borrowers who encounter temporary financial problems through no fault of their own would be assisted for up to eighteen months, and at the HUD Secretary's discretion for an additional eighteen months. Whenever a lender sells a loan to a secondary market investor, the lender ordinarily assumes a duty to make a monthly payment to an investor whether the borrower pays on time or not. This situation forces the lender to proceed quickly with foreclosure when payments are not received. This temporary relief will provide lenders with a steady stream of payments, while ensuring that the borrower is not foreclosed upon. The borrower must repay the assistance either during the life of the loan or when the home is sold.

MBA appreciates the opportunity to testify before this Subcommittee, and would be happy to answer any questions or provide additional material upon request.

STATEMENT OF JOSEPH F. LADEN, EXECUTIVE DIRECTOR, PUBLIC HOUSING AUTHORITIES DIRECTORS' ASSOCIATION

ACCOMPANIED BY MEL REECE, PRESIDENT, PUBLIC HOUSING AUTHORITIES DIRECTORS' ASSOCIATION

SUMMARY OF STATEMENT

Senator GARN. Now I would like to invite Mr. Joseph F. Laden up, executive director of the Public Housing Authorities Directors' Association.

Mr. LADEN. Thank you, Senator. We have today Mel Reece accompanying me. He is our president of the directors' association. He is here as a backup to answer your questions.

Our statement has been submitted to you and we will give you a brief summary of the items contained in the statement.

Our group represents 600 executive directors of the housing authorities throughout the United States. We take the position that the majority of the authorities are well managed and doing a good job. Generally, in those areas where there are problem PHA's other services in that urban community are generally in serious difficulties.

PHA OPERATING SUBSIDIES

We want to extend at this time our thanks to the U.S. Senate and other Members of Congress for their assistance in the past. Despite repeated underestimates of budget requirements by HUD, Congress has deemed it wise, in your judgment, to overrule HUD's request and provide us with funds. Particularly we are concerned about that $256 million.

Public housing executive directors recognize the serious financial problems and we pledge ourselves to cooperating 100 percent to reduce this cost and improve our management. We strongly disagree with Secretary Pierce's testimony where he recommended operating subsidies for fiscal 1983 of $1.006 billion. Every expert in the field estimates that this is incorrect and would recommend an appropriation for 1983 of approximately $1.6 billion.

MODERNIZATION PROGRAM

We urge Congress to provide full funding for the modernization program under the comprehensive improvement assistance program. We add a word of caution on this issue. Estimates from housing directors throughout the United States indicate that the Perkins and Will study, which is the basis for cost on the CIAP program, may be inadequate. We have many examples where the dollars that they estimate are not sufficient to do the job. Equally important under the CIAP program, and perhaps even more important, is the issue of establishing reserve. We urge the Senate to do everything possible to have HUD move forward on this issue. If replacement reserves are established it will reduce the future need for operating subsidies and will result in long-range savings.

HUD has promised and promised deregulation. We support this issue and we are convinced if there is substantial deregulation, we will be in a position to reduce costs. It would appear at this particular time that they will need additional urging from Congress if they are to move forward on this matter. We are concerned with the fact that often HUD estimates cost savings from deregulation and then applies these cost savings to our budgets before we have an opportunity of reaping the benefits of these savings.

We are particularly concerned with the issue that HUD has taken the position that State and local governments will provide funding for our housing programs. To date, we find no record where any HUD official has notified any Governor or mayor of this new obligation. We seriously doubt that the cities and the States of this country will be in a position to provide additional funding for housing under the present budget constraints.

NEED FOR HOUSING UNITS

Administration officials have repeatedly taken the position that public housing production for subsidized housing can be substantially reduced or eliminated. Any executive director in this Nation will gladly testify that one of the most serious problems he faces each day is the long waiting list for housing units. Our waiting lists certainly disagree with the figure HUD has provided, or other so-called experts. There is a need for continued production, and it would be in the interest of this Nation if this program could be kept in motion despite the financial constraints we face today.

Public housing directors are meeting in Washington the second week of June. At that particular time we will have a revised position paper and we will submit it to the committee.

We have one more recommendation at this time. We believe that it would be in the interest of all if we could get as many members of your staff in the Senate and House to visit our sites. A picture is worth a thousand words. If you could come out and take a look at what we have, you will better understand what our needs are.

We are willing to accept any questions now.

NEED FOR OPERATING FUNDS

Senator GARN. I understand your request for additional operating funds, and I have been on both ends of that. I was a member of the housing authority when I was mayor of Salt Lake City. But how do we control the growth of operating funds? It has been my experience, and I say this as a former local official, once we get into operating funds, whether it is housing or whether it is transportation, it balloons incredibly, because it is easier for local officials when Federal money is involved. Everything seems to loosen up. My kids are the same way. It is amazing how much easier they spend my money than if they earn it themselves.

So I am asking a general question. There is always the request from local officials that they have to have more operating funds; I see no end to that until there is more restraint at the local government. Do you have a response?

Mr. LADEN. I have a feeling part of the answer is the responsibility of the executive director to manage the business well. However, the system does not seem to reward good management; it seems to reward bad management.

Senator GARN. It certainly has in Chicago.

Mr. LADEN. I will agree with you. But we have to have a system where good management is recognized and given credit and perhaps some reward. There are certain costs that we have not been able to control, and that is basically utility costs. However, what is happening now in the majority of the authorities, utility costs are going to come up in bulk. We can't control that.

Did you want to add anything?

Mr. REECE. I think we have to really make housing authorities operate more like a business, not like a government agency, and that is why I have some question myself. As an ex-mayor, Senator, you can see what would happen. I happen to come from a city where we have the mayor with the longest tenure in the United States. He is serving his 11th term, which would be 44 years. He is completely independent of housing. He would take the benefit for dedication, and I better manage down there and if I am short of money I better not come to him. I think we have to take that positive step. When you have troubled authorities they are normally troubled cities, and in a lot of cases there is too much politics involved in that authority, too.

Senator GARN. I couldn't agree with you more. I suggest when you meet the second week in June this is a problem you have to address, because with the budgetary problems we have overall, as sympathetic as I may be as a former mayor, there has to be some limitations on these increases whether we like it or not. I agree with you it has to come in the form of better management and some system where we do reward good management.

I have a lot of former managers of PHA's who are friends of mine come in and they are just aghast when they see examples like Chicago and other cities and they are running good PHA's and are not rewarded. Maybe this is where it needs to start, maybe not the elected officials but you who are full-time managers. This is the type of attitude I am going to have to take as chairman of both the Banking Committee and this subcommittee, that no matter how sympathetic I may be, unless there are some improvements the only tool I have is to cut the amount of operating tools and say, "Hey, fellow, you have to figure it out." Rather than getting to that point of putting you in difficulty, I would like some input on how we control the operating subsidy problem.

No doubt if you cut operating subsidies inefficiency will still go on. I am making a very sincere request that you address the problem and see if you can advise the committee on how we can make some changes that would not only slow the growth in operating subsidies but use them much more effectively than they have been used in some PHA's.

Mr. REECE. We will follow up with some additional information on that.

Senator GARN. Thank you very much. I appreciate your testimony.

[The statement follows:]

Statement of Joseph F. Laden, Vice President for Legislation, Public Housing Authorities Directors Association

My name is Joseph F. Laden, and I am the Vice President for Legislation for the Public Housing Authorities Directors Association. I have also been the Executive Director of the Housing Authority of Albany, New York since October, 1974.

Our association represents over 600 housing authorities throughout the United States and our membership is limited to executive directors. We are a professional organization dedicated to the management of public housing authorities and to the improvement of the operations of public housing authorities and other subsidized housing throughout the United States.

We represent some of the best managed authorities in this nation and we are also very familiar with the problems of what are often called "troubled PHA's".

We are dedicated to the public housing system and contend that the vast majority of authorities in this country are well managed. When a troubled PHA is identified, it will often be found that not only is the public housing in that particular city in trouble, but most other types of services provided to the community are in equal trouble. We would also add that in the majority of cases where a troubled PHA exists, there is often serious management problems in the local HUD area or regional office.

We would first like to take this opportunity to extend our gratitude to the United States Senate for the strong support it has provided for public housing programs in past years. Repeatedly, the Senate has disregarded HUD's underestimate of the needs of public housing authorities for operating subsidies and production and has provided more funds than were recommended by HUD. We recognize the fact that Congress has continued to support the concept of providing housing for those in need and we are certain that this position will be continued in the coming years in spite of some of the recommendations coming out of HUD.

The Executive Directors of public housing are committed to:

1. Better management of our existing stock
2. Reduced operating cost of our present stock
3. More efficient production and reduced time for construction of all future developments
4. Providing our tenants the best housing possible at affordable prices.

We believe the public housing program in this nation has more support than is generally recognized. We have a substantial number of tenants, but in addition to our present tenant population, there are two other most important groups.

THE FIRST GROUP ARE THOSE WHO WERE OUR FORMER TENANTS BUT ARE PRESENTLY LIVING IN OTHER HOUSING MARKETS AND WERE ABLE TO UPGRADE THEIR LIFE STYLE DUE TO THE FACT THAT PUBLIC HOUSING PROVIDED A SHELTER WHICH THEY COULD AFFORD WHEN IN NEED.

THERE IS ALSO ANOTHER GROUP OF INDIVIDUALS WHO ONLY PUBLIC HOUSING DIRECTORS PROBABLY REALLY UNDERSTAND - AND THEY ARE THE CHILDREN OF MANY OF OUR ELDERLY TENANTS. EXECUTIVE DIRECTORS REPORT THAT THEY OFTEN RECEIVE PHONE CALLS OF INQUIRIES CONCERNING THEIR TENANTS WHO ARE LIVING IN HOUSING FOR THE ELDERLY FROM THE CHILDREN OF THE ELDERLY WHO EXPRESS A HIGH DEGREE OF GRATITUDE FOR THE HOUSING THAT IS PROVIDED FOR THEIR PARENTS. IF WE DID NOT PROVIDE THIS HOUSING FOR THE ELDERLY, MANY PARENTS WOULD BE FORCED TO RESIDE WITH THEIR CHILDREN, AND ALTHOUGH THE CHILDREN WOULD ACCEPT THESE RESPONSIBILITIES, THERE WOULD BE A GREAT DEAL OF INCONVENIENCE BOTH FOR THE CHILDREN AND TO THE ELDERLY PARENT.

THE EXECUTIVE DIRECTORS OF PUBLIC HOUSING AUTHORITIES RECOGNIZE THE SERIOUS FINANCIAL PROBLEMS FACING THIS NATION AND WE ARE WILLING TO DO EVERYTHING POSSIBLE TO HELP SOLVE SOME OF THESE PROBLEMS. JUST AS THE MEMBERS OF CONGRESS HAVE RECEIVED REAMS OF RECOMMENDATIONS FROM HUD, LARGE HOUSING AUTHORITIES AND OTHER GROUPS CONCERNING RECOMMENDED IMPROVEMENTS IN HOUSING, WE HAVE RECEIVED SIMILAR RECOMMENDATIONS FROM THE SAME GROUPS AND ALSO FROM OUR 600 MEMBERS. THERE ARE MANY SOLUTIONS OFFERED, BUT AT THIS PARTICULAR TIME, THERE ARE SEVERAL MOST IMPORTANT ITEMS THAT MUST BE CLEARLY ADDRESSED NOT ONLY IN THE CONCEPT OF IMPROVEMENT, BUT IN THE BASIC CONCEPT OF SURVIVAL OF PUBLIC HOUSING AND THE ECONOMIC WELL BEING OF THIS COUNTRY.

HUD HAS RECENTLY PRESENTED RECOMMENDATIONS ON THE PERFORMANCE FUNDING SYSTEM, WHICH ARE DESIGNED TO SUBSTANTIALLY REDUCE THE COST OF THE OPERATING SUBSIDIES. THIS IS A REPORT THAT IS LONG OVERDUE AND IS A MAJOR DISAPPOINTMENT TO THE EXECUTIVE DIRECTORS. THE REPORT FAILS IN ONE MOST IMPORTANT ASPECT -- THAT IS, TO MAKE A FIRM RECOMMENDATION ON ANYTHING!

HUD'S REPORT ON THE PFS WILL CERTAINLY HAVE NO EFFECT ON THE CURRENT OR THE 1983 FISCAL YEAR AND AT THIS TIME, THIS IS THE MOST IMPORTANT ISSUE THAT MUST BE ADDRESSED.

IN THE ORIGINAL TESTIMONY OF SECRETARY PIERCE, HE RECOMMENDED TO CONGRESS THAT OPERATING SUBSIDIES BE FUNDED AT AN AMOUNT OF 1.006 BILLION DOLLARS. GENTLEMEN -- THE INFORMATION WE HAVE AND THAT HAS BEEN PRESENTED TO YOU BY ANYONE KNOWLEDGEABLE ON THE SUBJECT CERTAINLY INDICATES THAT THIS IS SUBSTANTIALLY AN INACCURATE FIGURE. MOST EXPERTS ARE IN AGREEMENT THAT WE WILL NEED APPROXIMATELY 1.6 BILLION DOLLARS AND WE CANNOT UNDERSTAND WHY HUD CONTINUALLY UNDER-FUNDS ITS PROGRAMS. WE STRONGLY RECOMMEND THAT ACTION

BE TAKEN BY CONGRESS TO PROVIDE A SUPPLEMENTAL APPROPRIATION FOR 1982 FISCAL YEAR AND TO FULLY FUND THE 1983 FISCAL YEAR IN AMOUNTS SUFFICIENT TO MEET OUR NEEDS.

HOUSING AUTHORITIES SHOULD BE OPERATED LIKE A BUSINESS AND OUR EXECUTIVE DIRECTORS HAVE THIS AS THEIR OBJECTIVE. WE CANNOT OPERATE AS A BUSINESS WITH THIS HIGH DEGREE OF UNCERTAINTY AND INADEQUATE TIME FOR PLANNING.

THE NEXT MOST IMPORTANT ITEM FACING HOUSING DIRECTORS IS THE ADEQUATE FUNDING OF MODERNIZATION OF OUR EXISTING STOCK. WHEN CONGRESS PASSED THE COMPREHENSIVE IMPROVEMENT ASSISTANCE PROGRAM, IT WAS HAILED BY ALL EXPERTS IN THE FIELD AS A MAJOR STEP FORWARD AND WAS AN ANSWER TO THE RECOMMENDATIONS OF HOUSING DIRECTORS THROUGHOUT THIS COUNTRY TO PERMIT MULTI-YEAR PLANNING OF THE MODERNIZATION PROGRAM. WE KNOW OF NO REASON WHY THE ORIGINAL INTENT OF CONGRESS SHOULD BE DISREGARDED AND WHY THIS PROGRAM SHOULD NOT BE CONTINUED. APPARENTLY, THIS INFORMATION HAS NOT BEEN CONVEYED TO OUR FRIENDS AT HUD AND THEY ARE MOVING TOO SLOWLY TO IMPLEMENT THE ORIGINAL INTENTIONS OF CONGRESS. WE STRONGLY OBJECT TO THE POLICY OF "ROBBING PETER TO PAY PAUL" AND TAKING FUNDS FROM OBLIGATED CONSTRUCTION PROGRAMS AND DEVELOPMENT PROGRAMS AND TRANSFERRING THEM TO MODERNIZATION. IF IT WAS CONGRESS' INTENTIONS TO HAVE THESE UNITS CONSTRUCTED, IT SHOULD NOT BE HUD'S PREROGATIVE TO CHANGE THEM.

ONE OF THE MOST IMPORTANT ITEMS IN THE C.I.A.P. WAS THE CONCEPT OF ESTABLISHING REPLACEMENT RESERVES FOR HOUSING AUTHORITIES. THIS WOULD BE A BUSINESS-LIKE APPROACH, WHICH COULD BE COMPARED TO A BUSINESS ESTABLISHING REPLACEMENT RESERVES AFTER THEY HAD CHARGED DEPRECIATION AS AN EXPENSE.

WE STRONGLY SUPPORT THIS CONCEPT. TO DATE, TO THE BEST OF OUR KNOWLEDGE, HUD HAS NOT ESTABLISHED ONE STUDY TO ESTIMATE THE POSSIBLE COST, METHODS AND PROCEDURES TO IMPLEMENT THIS PROGRAM. THIS PROGRAM SHOULD BE ESTABLISHED AND FUNDED BEFORE THE END OF THE FIFTH YEAR OF THE C.I.A.P., AND BASED ON PRESENT INFORMATION, THIS WILL NEVER OCCUR!

IF REPLACEMENT RESERVES COULD BE ESTABLISHED AND FULLY FUNDED, WE WOULD NOT HAVE TO COME BACK FOR LARGE MODERNIZATION FUNDING IN THE FUTURE AND OUR AUTHORITIES COULD BE OPERATED ON A MORE BUSINESS-LIKE APPROACH.

WE HAVE A SERIOUS CONCERN ON THE AMOUNT OF FUNDING NEEDED FOR THE MODERNIZATION PROGRAM. HUD'S ESTIMATES ARE BASED ON THE PERKINS AND WILLS STUDIES AND PRELIMINARY ANALYSIS OF THESE FIGURES BY VARIOUS HOUSING DIRECTORS HAS INDICATED THAT THE AMOUNTS ESTIMATED ARE SUBSTANTIALLY LESS THAN WHAT WILL ACTUALLY BE NEEDED.

AT THE START OF THE PRESENT ADMINISTRATION, WE RECEIVED GREAT PROMISES OF SUBSTANTIAL DEREGULATION. WE HAVE BEEN WAITING AND DEREGULATION HAS NOT GONE INTO EFFECT. WE AGREE THAT SUBSTANTIAL DEREGULATION OF OUR PROGRAMS

CAN RESULT IN DOLLAR SAVINGS. WE OBJECT TO THE FACT THAT HUD MAY WANT TO ESTABLISH THE DOLLAR SAVINGS BEFORE DEREGULATION HAS HAD TIME TO TAKE EFFECT. WE ALSO ARE VERY DISAPPOINTED IN THE PROGRESS OF DEREGULATION AND URGE CONGRESS TO DO EVERYTHING POSSIBLE TO SPEED UP THIS PROCESS.

THE ADMINISTRATION HAS MADE RECOMMENDATIONS TO CONGRESS ON THE ASSUMPTION THAT THERE COULD BE SUBSTANTIAL SAVINGS IN OPERATING COSTS BY REDEFINING THE RULES OF THE PFS AND ALSO BY ANTICIPATING PARTICIPATION IN THE FUNDING BY STATE AND LOCAL GOVERNMENTS. WE HAVE DISCUSSED THIS WITH HOUSING DIRECTORS ACROSS THIS COUNTRY AND THIS INCREASED FUNDING FROM STATE AND LOCAL GOVERNMENTS PRESENTS A MOST CONFUSING CONCEPT TO THEM. NO STATE OR NO LOCAL GOVERNMENT TO MY KNOWLEDGE HAS BEEN ADVISED AS TO THE AMOUNT OF ADDITIONAL FUNDS THEY WILL HAVE TO PRESENT AND ALSO WHERE THEY ARE GOING TO GET THESE FUNDS. MOST OF OUR STATE AND LOCAL GOVERNMENTS ARE FINANCIALLY UNABLE TO PROVIDE ADDITIONAL HOUSING FUNDING FOR FEDERAL PUBLIC HOUSING DEVELOPMENTS. WE HAVE NEVER SEEN A COMMUNICATION ON THE PART OF THE SECRETARY OF HUD DIRECTED TO ANY GOVERNOR OR TO ANY MAYOR OUTLINING THE AMOUNT THAT THEY WOULD BE EXPECTED TO CONTRIBUTE AND HOW THEY WOULD SUPPLY THESE NEEDED FUNDS. IF THIS IS TO BE PART OF OUR NATIONAL POLICY, WE BELIEVE IT SHOULD BE STATED OUT FRONT BY ALL RESPONSIBLE PARTIES SO THESE STATE AND LOCAL GOVERNMENT LEADERS CAN DETERMINE HOW THEY WILL PROVIDE THESE ADDITIONAL FUNDS.

LAST YEAR WHERE MANY HOUSING AUTHORITY DIRECTORS IN VARIOUS STATES MADE A SPECIAL EFFORT TO HAVE FUNDS UNDER THE HEAP PROGRAM MADE AVAILABLE TO THEIR AUTHORITIES, THEY WERE SHOCKED WHEN HUD CHANGED THE RULES IN THE MIDDLE OF THE YEAR AND HAD THESE FUNDS DEDUCTED FROM THEIR OPERATING SUBSIDIES. MANY INDIVIDUAL DIRECTORS PLEADED WITH THEIR STATES AND MADE A GUARANTEE THAT IF THEY RECEIVED THESE FUNDS, IT WOULD NOT AFFECT THEIR FEDERAL FUNDING. THEY WERE INCORRECT IN THIS ASSUMPTION BECAUSE THEY DID NOT REALIZE THAT HUD WOULD CHANGE THE RULES IN THE MIDDLE OF THE BALL GAME. THERE IS LITTLE OPPORTUNITY IN THE FUTURE FOR THIS SOURCE OF FUNDING SINCE STATES ARE NOT GOING TO TAKE FEDERAL MONIES THAT THEY RECEIVE FOR A PARTICULAR PROGRAM, GIVE IT TO ANOTHER AGENCY AND FIND OUT THAT, LATER THE FEDERAL GOVERNMENT CAME BACK AND TOOK THAT MONEY BACK BECAUSE THEY GAVE IT TO THIS OTHER AGENCY - IT'S JUST NOT GOOD BUSINESS!!!

WE HAVE LOOKED CAREFULLY AT THE PRESIDENT'S COMMISSION WORK ON HOUSING VOUCHERS AND HAVE PRESENTED TO THEM DETAILED COMMENTS. WE URGE CONGRESS TO MOVE VERY CAUTIOUSLY ON THIS ISSUE SINCE WE ALREADY HAVE A GOOD PROGRAM IN THE SECTION 8 EXISTING PROGRAM, AND LET'S NOT DISREGARD THIS BEFORE WE ARE READY FOR A TRULY BETTER SYSTEM. WE ARE STILL FIRMLY COMMITTED TO THE FACT THAT ONE OF THE BETTER HOUSING PRODUCTIONS SYSTEMS IS THE PUBLIC HOUSING CONSTRUCTION PROGRAM AND WE URGE CONGRESS TO BE CERTAIN THAT HUD IS NOT PERMIT-

TED TO DISMANTLE THIS PROGRAM SINCE THIS COULD BE A TREMENDOUS ASSET IN ASSISTING IN THE RECOVERY OF THIS NATION FROM ITS PRESENT ECONOMIC LOW POINT.

IT IS EVIDENT THAT CONGRESS, HUD AND THE PUBLIC HOUSING EXECUTIVE DIRECTORS ALL RECOGNIZE SEVERE FINANCIAL PROBLEMS FACED BY THIS NATION AND THAT WE ALL EQUALLY DESIRE TO PARTICIPATE IN SOLVING THESE PROBLEMS.

IN SOLVING THESE PROBLEMS, LET US BE CERTAIN THAT WE DO NOT DESTROY ONE OF THE BEST SYSTEMS FOR PROVIDING FOR THE NEEDS OF LOW INCOME RESIDENTS. OUR PUBLIC HOUSING TENANTS OF LOW INCOME RECEIVE SUBSTANTIALLY BETTER HOUSING THAN ANY OTHER NATION. WHEN YOU COMPARE OUR SYSTEM WITH THE EUROPEAN SYSTEMS OR WITH THE RUSSIAN SYSTEMS, WE ARE TAKING BETTER CARE OF OUR NEEDY THAN THOSE OF ANY OTHER COUNTRY. WE HAVE ONE MAJOR DEFICIENCY AND WE WOULD LIKE TO CAREFULLY CALL THAT TO YOUR ATTENTION. WE HAVE SUBSTANTIAL WAITING LISTS -- THERE ARE PEOPLE WHO HAVE COME BEFORE THE ADMINISTRATION WHO HAVE SAID "WE DO NOT NEED MORE HOUSING". EVERY EXECUTIVE DIRECTOR IN THIS NATION WILL STRONGLY DISAGREE WITH THIS POSITION. IF YOU SIT IN OUR OFFICES AND YOU RECEIVE THE PHONE CALLS AND THE PLEAS FROM NOT ONLY THE INDIVIDUALS, BUT FROM OTHER MEMBERS OF THE COMMUNITY ASKING US TO PROVIDE HOUSING FOR THE NEEDY, YOU WILL WELL UNDERSTAND OUR POSITION. WE HAVE DONE A GOOD JOB IN THE PAST 20 YEARS IN DEVELOPING HOUSING FOR THOSE IN NEED, BUT WE HAVE A LONG WAY TO GO AND WE SHOULD NEVER FORGET THAT IT IS THE OBLIGATION OF THIS COUNTRY TO PROVIDE FOR THOSE WHO CANNOT PROVIDE FOR THEMSELVES.

WE STAND READY TO HAVE THE RESOURCES OF ALL OUR MEMBERSHIP MADE AVAILABLE TO YOUR COMMITTEE OR ANY OTHER GROUP IN THE U.S. CONGRESS. WE ARE HOLDING A NATIONAL MEETING OF HOUSING DIRECTORS IN WASHINGTON, D.C. ON JUNE 8, 9, 10, 1982 AND AT THE CONCLUSION OF THAT MEETING, WE WILL PRESENT A POSITION PAPER ON ALL THE PUBLIC HOUSING ISSUES. WE WILL FORWARD TO YOUR COMMITTEE COPIES OF THIS POSITION PAPER.

WE ALSO BELIEVE IN THE OLD CHINESE PROVERB THAT "A PICTURE IS WORTH A THOUSAND WORDS", AND WE THEREFORE INVITE YOU, AND URGE YOU, TO VISIT VARIOUS PUBLIC HOUSING SITES THROUGHOUT THE UNITED STATES. IF YOU WILL CONTACT OUR OFFICE, WE WILL BE HAPPY TO ARRANGE FOR A TOUR OF VARIOUS HOUSING AUTHORITIES AT YOUR CONVENIENCE AND THIS INVITATION IS ALSO EXTENDED TO MEMBERS OF YOUR STAFF.

THANK YOU!!

STATEMENT OF ROBERT PASCAL, COUNTY EXECUTIVE, ANNE ARUNDEL COUNTY, MD.

ACCOMPANIED BY DONALD L. ROSENSHINE, EXECUTIVE DIRECTOR, ANNE ARUNDEL COUNTY HOUSING AUTHORITY

Senator GARN. Our next witness is Mr. Robert Pascal.

Senator Mathias did want to be here to hear your testimony. However, due to another committee meeting he will not be here. I would, therefore, like to submit his statement for the record at this point.

STATEMENT OF SENATOR CHARLES MCC. MATHIAS, JR.

Mr. Chairman, as a former member of the Senate Subcommittee on HUD–Independent Agencies, it gives me great pleasure to appear before you today to introduce my friend and one of Maryland's most capable leaders, the Honorable Robert A. Pascal, county executive of Anne Arundel County.

Since Bob took office in 1975, the housing picture in Anne Arundel County has changed dramatically. Between 1975 and 1980, the population of the county grew by 10 percent from 337,000 to 371,000. During that same period, the number of households increased 19 percent from 102,000 to 121,000. While the demand for housing has been increasing, housing production has been decreasing. In 1981, new residential construction in Anne Arundel County dropped 30 percent from the 1980 levels.

Bob Pascal has worked hard to provide for the housing needs of all residents of the county from the elderly poor to Baltimore-Washington commuters under this growing and difficult situation. During his career, he has been a smart businessman, an effective adminstrator, and a forceful political leader. I think we in Congress can benefit greatly from the experience and comments of Mr. Pascal who refuses to believe this basic problem cannot be solved by a combination of intelligence, innovation, and hard work. His record in helping to increase the availability of housing for all citizens speaks for itself.

Mr. Chairman, allow me to introduce Bob Pascal.

Senator GARN. I certainly would like to note for the record Senator Mathias' strong support for public housing, which certainly was evident during the years he was the ranking minority member of this subcommittee.

Mr. Pascal, we are happy to welcome you here today and would be pleased to receive your testimony at this time.

Mr. PASCAL. Thank you, Senator, and I am going to make this as brief as possible. Accompanying me is Donald L. Rosenshine who heads our housing authority.

For the record my name is Robert Pascal and I am county executive of Anne Arundel County, Md. I would like to paraphrase my written testimony.

Senator, I come from a county of about 400,000 which borders Baltimore City and includes the city of Annapolis. We have as far as public housing units 844 section 8, about 400 modern rehab, about 40 in the city of Annapolis, about 1,200 section 8.

Senator, I have taken a public stance that I think in public housing we have kind of missed the flavor of what it was all about. When it was initiated, it was supposed to be an interim step for people. Unfortunately, it has become, in many cases, the last step. When we compare public housing with a dirt floor, we have promoted public housing.

But I have been promoting ownership. We have been taking the community block grant money, spending a lot of it on rehab, things of that nature, keeping people in their homes. I have said publicly that many times in public housing, and I think the exception is in our case, we create more socioeconomic problems than we sometimes cure. But I think there is a solution to a lot of that problem, to the operating costs, to the maintenance costs, to the heating, and so forth, Senator, if we could develop a way in which these people who have no hope of ever owning any part of the American dream, ownership of that public housing unit, where rather than the rent subsidy we help a mortgage subsidy. We have been trying to kick around some ideas with some tax people, some HUD people, as to how that can come about. But I think the Federal Government and its resources, and particularly in the elected official arena, have to hopefully agree if we give somebody an opportunity to own that particular housing unit the obvious happens. The maintenance goes down. I would think the utilities go down. You certainly have pride of ownership and you certainly then begin to have a taxable entity. And I just think the whole attitude in that arena could change.

We have gotten some excellent response from the people we have talked to on every end of the spectrum. The reason I am here this morning is to express that view to you, because right now in the economy we live in I would say probably 100,000 people in the State of Maryland—I don't know how many throughout the country—have no hope of ever owning a home or apartment or condominium. If we can give our hope to that, I think we will be on our way to solving a lot of problems in our area.

Senator GARN. Mr. Pascal, I certainly agree with you. Totally apart from public housing, I have seen neighborhoods completely change when primarily low- and moderate-income individuals who live in rental units and are encouraged through private sources, in this case cooperation of financial institutions, city government, and so on, to purchase their own homes. When this happens, it is absolutely amazing how the whole character of the neighborhood changes, not only the maintenance of the houses but also the yards and streets.

So I have seen physical evidence of what you say over and over again. There is a pride of ownership when people have a stake in their housing and can fix it up themselves, it is really quite different. I have never opposed public housing just to oppose public housing but have always felt there is a better way. In fact, it doesn't matter whether it is public housing or whether it is a landlord in the private sector; it is the same situation. The ownership does change the character of an individual home, apartment, townhouse, and neighborhood. We have certainly seen evidence of that in Baltimore with what NHS has been able to do and with the urban homesteading, where they were selling houses for a dollar apiece.

There is a lot of valuable housing stock in this country which is being underutilized or not utilized at all. So I generally agree with the concept you are talking about and feel we should do as much as possible to encourage homeownership.

Mr. Pascal. Senator, if I may just suggest, as you know, when you ask the bureaucracy to sometimes change attitudes or do it a little differently you run into great obstacles. If some knowledgeable people began to look into perhaps tax incentives of investors, we have been trying to some up with something of that nature to present to people or to the Federal authorities, particularly the elected officials. Is there something in the Tax Code that could be amended to indeed give the private sector the opportunity to come in and run them and then turn them over to public ownership? We have been looking into something like that. Is there any Federal agency or Federal initiative going on that you know of that is moving HUD in that direction?

Senator Garn. Well, you are getting into an area now that is under the jurisdiction of the Finance Committee and out of the area of the Banking Committee's jurisdiction. But, I certainly think it makes a great deal more sense to try to go that direction and encourage some tax incentives for ownership. Certainly we are not doing that now but, in fact, are going the other way through direct subsidies. Even the voucher program, while I think it is an improvement over our current housing programs, it still doesn't add to the desirability of purchasing or ownership. You are still subsidizing rent through a different means, which may be improved but still doesn't go far enough in my opinion.

Mr. Pascal. Well, I have one more remark for the record. We have a tremendous shortage of rentals, as I have heard testimony. We have a long waiting list of people who are looking for some type of shelter. We are trying to provide. But we will be coming back, hopefully, with some different suggestions on this ownership and getting maybe your thoughts on them, because I really believe if we in the urban areas all over this country can indicate to mayors and county executives here is an opportunity for those people who live in that type of housing, I think you are going to see a real opportunity and morale builder and a lot of hope for people who don't have any hope today.

Senator Garn. I would appreciate any additional information or ideas you may have. Certainly we don't have to wait for annual public witness hearings to receive information. My staff and I are around any time. We are certainly willing to accept any suggestions which you or others might have on a continuing basis.

Mr. Pascal. Thank you very much, Senator.

[The statement follows:]

STATEMENT OF ROBERT A. PASCAL, COUNTY EXECUTIVE, ANNE ARUNDEL COUNTY, MD.

Mr. Chairman, thank you for the opportunity to appear before the Subcommittee on HUD and Independent Agencies and to present my views as an elected local government official. My name is Robert A. Pascal and I am the County Executive of Anne Arundel County, Maryland, a county of approximately 400,000 located 20 miles east of Washington, D.C.

I entered office 7½ years ago with an agenda which outlined the critical problems in my county and the proposals I wished to implement to solve them. The problems I identified were similar to those other local elected officials across the country face on a daily basis:

- Management of Community Growth and the provision of adequate public services
- Drug/Alcohol Abuse
- Juvenile Crime
- Economic Development
- Services for Senior Citizens
- Poverty

As I complete my final year in office, I can report that our County has developed effective solutions to most of these problems. We have a Growth Management Ordinance which coordinates development with the availability of public services; we have a community based drug prevention program which relies heavily on parental involvement; we have implemented innovative programs to deal with repeat juvenile offenders and promote juvenile restitution; we have significantly improved our economic development program; we have developed senior centers and a comprehensive package of services for senior citizens; and we have provided strong support for those programs, such as the Community Action Agency, which help our lower income population.

HOWEVER, IN SPITE OF ALL THESE ACCOMPLISHMENTS THERE IS STILL ONE AREA OF UNFINISHED BUSINESS. I AM NOT SATISFIED THAT WE HAVE BEEN

SUCCESSFUL IN RESOLVING THE MOST IMPORTANT PROBLEM OF OUR ECONOMICALLY DISADVANTAGED. WE HAVE NOT CREATED THE CLIMATE OF HOPE THAT I BELIEVE IS ESSENTIAL FOR AN INDIVIDUAL TO BECOME A PRODUCTIVE MEMBER OF OUR SOCIETY.

This failure is one I believe you and I share together. It is a failure which stems from our inability to provide our citizens with access to two things:

1. Jobs
2. A stake in our economic system

If this were a hearing on the Department of Labor, I would stress the need for a jobs program, particularly for our major urban centers. However, since this is not the case I will focus my comments on HUD and the need to provide an opportunity in our economic system for the economically disadvantaged.

Your first question might be - Is it really important that everyone have a stake in our economic system? I could answer that by asking you how important your stake in our economic system is to you - but I won't. Rather, let me use an illustration from the business world to answer you. I'm sure that you are all familiar with the fundamental equation in accounting:

ASSETS = LIABILITIES + OWNER'S EQUITY

When considering a loan application for a new business, a lender is particularly interested in the amount of OWNER'S EQUITY, or stake, that an applicant has in the business. For the lender, OWNER'S EQUITY becomes a measure of the applicant's commitment and his or her estimate of their probability of success. There is an inherent assumption that the greater the OWNER'S EQUITY the greater the applicant's motivation to make the business go. When all else is equal, the higher the percentage of OWNER'S EQUITY the lower the risk that is incurred by the lender because the borrower has a greater personal investment, or stake, in the operation of the business enterprise.

The answer to your question therefore is: Yes - it is important that everyone have a stake in our economic system. For just as in the business enterprise, the more owner's equity on an individual's personal balance sheet the greater their investment in the success of our economic system.

Unfortunately, for a large number of Americans today there is no OWNER'S EQUITY on their personal balance sheet. They have no personal stake in our economic system. And perhaps even more frightening, they have no HOPE that this will change. This is particularly true for those people who we find in our public housing projects and in the Section 8 rental assistance program. I believe that if this group had the opportunity to get a "piece of the economic pie" it would give them a ray of hope.

In order to create this opportunity, I am proposing that a renewed emphasis should be placed upon HOME OWNERSHIP for housing assistance recipients as a part of our national housing policy. I am urging you to strengthen the home ownership component of our housing assistance program so that we will truly have a continuum that ends in the HOPE OF HOME OWNERSHIP.

What can we expect when we stop subsidizing an individual's monthly rental payment and we begin to subsidize their monthly mortgage payment? I believe that we will help that individual build their stake in our economic system. As the individual's stake grows, as the OWNER'S EQUITY on their personal balance sheet increases, we will see them become more productive members of our country. They will develop the "heat and energy...courage and skill" that George Gilder tells us our economy runs on. They will develop the motivational advantage that Harvey Leibenstein of Harvard calls the "X-efficiency" to which he attributes the productivity differences between organizations. They will develop these, because, when they become HOME OWNERS, like you and me, they will become capitalist, like you and me. They will have a stake in our economic system, like you and me. They will have HOPE, like you and me.

At this point some of you are probably thinking that the theory is nice but the implementation would be difficult. You're right it will be difficult. It will be difficult because of today's economy. It will be difficult because of the bureaucratic complexities of such a program and you can bet my staff has already begun to point them out to me. But ladies and gentlemen, no one promised us that being an elected official would be easy. If we do not have the courage to undertake the difficult, who will? And, finally, can we afford not to do something just because it's difficult, when IT'S RIGHT?

Thank you.

SUBCOMMITTEE RECESS

Senator GARN. The committee will stand in recess until 1:30 this afternoon.

[Whereupon, at 11:55 a.m., the subcommittee was recessed, to reconvene at 1:30 p.m. the same day.]

(AFTERNOON SESSION, 1:30 P.M., TUESDAY, MAY 25, 1982)

NONDEPARTMENTAL WITNESSES

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

STATEMENT OF CHARLES L. EDSON, COUNSEL, NATIONAL LEASED HOUSING ASSOCIATION

RENTAL HOUSING CRISIS

Senator D'AMATO [presiding]. The committee will come to order.

Mr. Charles L. Edson, counsel, National Leased Housing Association.

Senator D'AMATO. If you could summarize your testimony.

Mr. EDSON. If I may just insert this into the record and I will discuss briefly in summuary form.

The National Leased Housing Association is a 10-year-old organization. For most of those years we were concerned with the section 8 program and we still are, but we have now widened our interest to rental housing generally. And certainly its real interest in rental housing. I need not tell the Senator from New York about the rental housing crisis. But nationally, last year only 55,000 nonsubsidized rental starts in the whole country against the needs of 400,000 units. So rental housing is a really great concern.

The first thing we would like to testify in favor of is an appropriation to at least match the authorization of $300 million for the rental housing programs that were in the authorizing legislation reported out of the Banking, Housing, and Urban Affairs Committee.

I want to commend the chairman because we would probably not have a rental housing initiative that encompassed new construction and substantial rehabilitation but for the good work that you and your staff did working with Senator Dodd and his staff to broaden the administration's proposal to include new construction and substantial rehabilitation.

We who are concerned with rental housing really want to commend you and your colleagues for that effort and I am glad that we have something at the Appropriations Committee that we can support from the authorizing bill.

The House committee authorized $1.3 billion for that program, just a tiny difference of $1 billion, and we would certainly tend to the House figure as more realistic but you probably have to act within the scope of your authorizing legislation and we hope you will go to the full $300 million. But really, although this may be a hearing on the fiscal year 1983 bill, our eyes have to be on the fiscal year 1982 and we know that your committee has already acted on the supplemental appropriations bill, the urgent supplemental, and indeed it is on the floor at this very moment. But there are some provisions that will come up in conference and as you all will undoubtedly be conferees on that bill, I would like to call them to your attention.

SECTION 8 PIPELINE FUNDING

We commend you for including provisions to try and get the section 8 pipeline funding, you included language and what is called the 7¾ provision to 7¾ percent, and also you would have extended the financing adjustment factor, or the fact to October 31, which I think was a very good provision in your bill. In fact, they are more liberal than the provisions that are in the House urgent appropriations bill.

What you did not do is include any money for tandem. The House included $1 billion for emergency tandem; the Senate has nothing. There are projects that cannot use the financing adjustment factors; especially what they call 20-percent section 8, they cannot use 11(b) financing, and it is very cumbersome to get them financed without tandem. We feel there is about $1 billion worth of projects that are backed up and will not be funded although developers have spent hundreds of thousands of dollars on reliance of their being funded, unless there is tandem. And when you do go to conference, we respectfully urge that you work out a very nice deal with the House to get them to recede on the 7¾ language in the October 1 or 31 date, and you recede on the $1 billion tandem. You each would have gotten something and the country would have gotten the pipeline funded and get housing started now and have needed units of low-income housing.

We are here to recommend. We think there is a good future in your supplemental bill, and in the bill you reported out of your authorizing committee, and we hope if you can follow the suggestions that are in our testimony, we would have gone a long way to getting the pipeline funded.

Thank you very much for your attention.

Senator D'AMATO. Let me take this opportunity to thank you and your associates for your work and assistance in helping us put together some affirmative, long overdue relief. You are to be commended for your attempt to create more additional housing units, particularly saving those that otherwise would go into blight. Thank you for your efforts.

Mr. EDSON. Thank you.

[The statement follows:]

STATEMENT OF CHARLES L. EDSON, COUNSEL, NATIONAL LEASED HOUSING ASSOCIATION

My name is Charles L. Edson. I am a member of the Washington law firm of Lane and Edson, P.C. and Counsel to the National Leased Housing Association on whose behalf I testify today.

Although NLHA has appeared before your Committee for many years, we appear today in a new and broader role. In our early years, we were the advocates for the Section 23 Leased Housing Program, and since 1974, we have been solely involved in fostering a strong and workable Section 8. In recent times, however, we have broadened our concern to all rental housing, especially rental housing in which the government is involved either through assistance or insurance.

This emphasis on rental housing is most timely. In addition to traditional renter groups -- the young, the elderly and the transient -- we now have an ever-increasing group of families who just don't have the funds available to buy their own home. In addition, many others are now choosing to rent instead of buy, as it becomes apparent that home ownership in the 1980's just will not be the miraculous investment it has been in the past decade. Significantly, the General Accounting Office, in its recent evaluation of the recommendations of the President's Commission on Housing, questioned whether there is a sufficient stock of rental housing in specific communities for the highly touted voucher system to be workable, and that in tight rental markets the voucher system might be more expensive to the government than a housing production program.

Although the demand for rental housing is at an all time high, its production is at an all time low -- barely 50,000 unsubsidized units in 1981. It is to correct this imbalance, while also focusing on the management and preservation of our existing stock, that NLHA will now be directing its activities.

Our primary purpose here today is to urge this Committee to support an amount of funding for the new rental housing initiative at least equal to the level contained in the Senate Banking, Housing and Urban Affairs committee bill S.2171. The need for a rental housing production program is clear. Various studies estimate an annual shortfall of multifamily units of between 170,000 and 302,000 units per year. Indeed one study estimated an annual need of 500,000 rental units. This figure should be compared with the 45,000 rental starts in 1981 that occurred without government subsidy.

The new rental program in the authorization bill would establish a block grant program for local governments to assist new rental construction, with a funding level of $300 million. The initiative would involve an initial subsidy to the developer, which could take the form of an interest rate write down or any other financing mechanism the local government chooses. This type of obligation differs drastically from the Federal government's obligation of up to forty years under Section 8.

Equally as important as developing a new production initiative is ensuring that those projects in the Section 8 pipeline are built. We commend you for including provisions in the urgent supplemental appropriations bill extending the FAF deadline to October 1, 1982 and removing the 7-3/4 percent limit on preconstruction increases in the contract rent to allow increases in contract rent before construction on the basis of actual cost.

We also urge you to reconsider your position on supplemental GNMA Tandem funds for 1982 when you meet in conference committee to settle the urgent supplement appropriations bill.

The process of ironing out a revised and workable Financing Adjustment Factor has been a long one, and still there are problems in its use. While the FAF may prove workable for some projects, those projects with a maximum of 20 percent Section 8 are not eligible to use FAF and desparately need Tandem financing.

It has also been predicited that there may be an insufficient number of recaptured projects to fund the revised FAF completely. It is important to ensure that those projects currently in the pipeline that are truly viable have both sufficient time and financing to be capable of a construction start. Additional Tandem funds are paramount to build the pipeline and provide the badly needed rental housing units.

We urge this Committee to take action to meet the rental housing crisis in this country. While there was objection voiced against the Section 8 new construction program because of its expense, the program was responsible for over 750,000 units of decent housing. These projects are well managed and are a credit to the communities in which they are located. It is necessary that we fashion a replacement which will provide us with similar result.

Thank you very much for your attention.

STATEMENT OF CUSHING N. DOLBEARE, PRESIDENT, NATIONAL LOW INCOME HOUSING COALITION

Senator D'AMATO. Cushing N. Dolbeare, president of the National Low Income Housing Commission.

I would be appreciative if you could also summarize your testimony as there are many others to be heard and we will see to it that it is included in the record as if read in its entirety.

Ms. DOLBEARE. Thank you very much. I would be delighted to summarize it, particularly since it is fairly lengthy.

SUMMARY OF STATEMENT

First of all, I would like to begin by agreeing, I think, with everything that our board member, Chuck Edson, just said about the 1982 supplemental appropriation.

Rather than repeating it again in my own words, I would simply like to have the record show that we are in full agreement on that.

PUBLIC HOUSING OPERATING SUBSIDIES

We have one additional concern with regard to that urgent supplemental appropriations bill and indeed with regard to the 1983 appropriation and that is public housing operating subsidies. We have communicated with the people we believe will be conferees on that bill and urged them, particularly urged the members of the House, to accept the Senate provision on operating subsidies. We don't understand or see how low-income housing can continue to operate unless that supplemental is provided.

FOUR MAJOR PRIORITIES

I would like, if I may, to focus on four major priorities which the National Low Income Coalition and other organizations concerned with low income housing have had this year. We are very unhappy, quite frankly, with the current state of subsidized housing. We have seen a long decline since 1976, which was the peak year for subsidized housing reservations in 1976, when President Ford was in office and Carla Hills was Secretary of HUD. The Department of HUD placed under program reservation 517,000 units of public housing in section 8.

That program has been a good program and a successful program. We think, as with all housing programs—I have been in housing 30 years, by the way, and one of the things we found is you enact a program, it takes a couple of years to get it going, and then you begin finding things wrong, and you start improving and just about when you are to the point where it really works, everybody says, "That is a terrible program; let's have another one." We very much regret the fact that the section 8 program is not being used as a basis for continuing construction and rehabilitation of low-income housing.

At the same time, we do commend the the bill, particularly titles I and II of the bill reported out by the Senate Banking Committee.

We hope that additional funds will be possible within the framework of the budget resolution to improve the budget level somewhat.

Our priorities this year in this time of attrition for low-income housing are, first, to maintain the stock of existing subsidized housing. And that means adequate operating subsidies, that means adequate modernization, that means adequate troubled project subsidies, this means including the State agencies projected in the troubled projects subsidy program.

It would be extremely penny-wise and pound-foolish to cut back on those appropriation to make it impossible for housing projects that have been constructed, that are in operation, that are now occupied by low-income people or that could be reoccupied by low-income people. In the case of vacant public housing projects, it would be totally wrong to permit that stock to evaporate, to permit HUD to encourage its demolition or disposition for other than low income use and occupancy.

So that is our first major priority.

TANDEM MONEY SOUGHT

Our second major priority is to build the pipeline.

Let's provide the tandem money, particularly for the 160 percent assisted project. Let's lift the 7¾ ceiling, but let's get that pipeline moving, let's build those units.

I think we would have less strenuous objections, perhaps to the administration's approach of reprograming if they had, in fact, proposed reprograming some of the money which had been used and if, in fact, they had made a convincing case that their new approaches and proposals are more efficient than the section 8 program. But, in fact, they have not made that case and, in fact, there is very little reprograming going on, most of it is eliminating subsidized housing units.

NEW OR SUBSTANTIALLY REHABILITATED HOUSING

Our third priority after maintaining the existing stock and building the pipeline, is to continue some form of additional provision of new or substantially rehabilitated housing for low- and moderate-income people.

I served as assistant and occasional alternate to Senator Brook, who is the chairperson of the coalition, as a member of the President's Commission on Housing. And that Housing Commission recommended vouchers as the major approach to providing housing assistance, but also in the report of the Commission on Housing itself is a very interesting table which shows that 50 percent of all of the households receiving section 8 existing certificates have been unable to find housing within the 60-day period allotted.

The proportion for minority households is 72 percent and the proportion for large households and single-parent households is even higher. Now nobody can quarrel with HUD's contention that if you give enough people certificates, sooner or later with a very limited number of certificates all of those certificates will be used. But I think the proposition that the existing housing stock without adding additional large units particularly, additional rehabilitated units, additional units where needed, the premise of existing housing can provide adequately for the people who need housing assistance the most, simply does not stand up under careful examination.

And finally, I would like, if I may, to introduce for the record, although I hope it is academic, a table which I just prepared this morning, which compares the budget recommendations of the Reagan administration, which are incorporated in the Latta substitute, which is presently pending in the House of Representative, with the recommended budget authority level freezing 1982, which is in the budget resolution, which was passed by the Senate, and it shows our estimate based on past experience of the dollars that would be lost in budget authority in 1983, and over the 1983 and 1985 period.

For example, in 1983 alone, if the Latta recommendation does happen to be adopted, the State of New York would lose $2.7 billion in budget authority for assisted housing, and over the 3-year period the loss would be an estimated $6.8 billion in budget authority for assisted housing.

We have comparable figures for all the other States and I would like to enter that in the record, along with my testimony.

Senator D'AMATO. Thank you very much. That will be entered into the record.

[The statement follows:]

STATEMENT OF CUSHING N. DOLBEARE, PRESIDENT, NATIONAL LOW INCOME HOUSING COALITION

This is, by almost any measure, a grim time for housing. New housing production is at its lowest levels in decades. Traditional forms of housing finance are stagnating, or worse. Unemployment of construction workers is approaching 20%. Given these problems and the outcry about them, it is all too easy to forget that the housing crisis for low income people -- whose problems are most acute -- is steadily worsening.

During the last decade, while the housing conditions of most Americans improved markedly, the housing situation of low income people was deteriorating. Low income people have not really shared in the general improvement in income -- but their housing costs have risen far more rapidly than those for middle and upper income people. Displacement is a major problem -- even from subsidized housing. Homelessness is increasing, and affecting families as well as single people. Although the rise in energy costs is decelerating, many low income people still cannot afford adequate heat. Unsubsidized private rental housing construction has dried up, and the Administration is in the process of attempting to retrieve subsidized units already in the pipeline.

This testimony will cover (1) the present housing situation of low income people, drawing on recently published Annual Housing Survey data for 1979 and 1980; (2) some of the major accomplishments of federally subsidized housing programs; (3) the cost of federal housing assistance, both directly and through the tax code; (4) the Administration's housing proposals and their impact; (5) the substantial rent increases for very poor people if food stamps are counted as income; (6) the proposals contained in H.R. 5731, the "Gonzalez bill"; and (7) some recommendations for dealing more adequately with the housing needs of low income people.

THE HOUSING SITUATION OF LOW INCOME PEOPLE

The housing problems faced by low income people are multiple and varied.

Historically, a major focus of housing concern has been on housing and neighborhood quality. Indeed, as recently as 1940, 45% of all occupied units in the United States were either dilapidated or lacked basic plumbing facilities. That figure has now fallen to well below 10%, with those units almost exclusively occupied by poor people.

As the incidence of substandard housing has declined, another major housing problem has arisen for low income people: affordability. Housing costs include not only the mortgage or rent, but also utilities, taxes, insurance, and maintenance (although some or all of the latter costs are typically included in rents). These operating costs, particularly utilities, have skyrocketed in recent years. All of us have felt the pinch of rising energy costs, but the impact has been worst for poor people.

The final major housing problem faced by low income people to a far greater degree than others is availability. Availability may be a problem either because the supply is inadequate or because of discrimination on the basis of race, income source, family composition or for other reasons.

> People with special housing needs, such as handicapped or frail elderly people, large renter households, and migrant farmworkers, face special problems of availability.
>
> So do blacks and other minorities, families with children -- especially if there is only a single parent, and households with irregular or very low incomes.

Since 1949, when Congress adopted the national goal of "a decent home and a suitable living environment for every American family" there has been bipartisan support for efforts to deal with the acute housing problems of low income people. Meanwhile, several decades of economic prosperity have created very high housing standards and expectations for most Americans.

Between 1970 and 1979, according to Annual Housing Survey data, the number of occupied housing units increased by almost one quarter (24.9%). Almost two thirds (65.4%) of all households owned or were buying their own homes. The number of units lacking plumbing facilities, a traditional measure of housing quality, dropped by 46%. While average household size fell sharply (from 3.0 to 2.6 persons for owner-occupied units and from 2.3 to 2.0 persons for renter-occupied units), housing units increased slightly in size. The number of units with three or more bedrooms increased by one third. There were sharp increases in the number of elderly households, single-parent households (both male and female heads), and single-person households.

Unfortunately, the cost of housing has increased far more rapidly than household incomes. Between 1970 and 1980:

> Median income for owners rose 104% (from $9700 to $19,800), while median value tripled (from $17,100 to $51,300).
>
> Median renter income rose 66% (from $6,400 to $10,600), while median rents increased by 123% (from $108 to $241).

The income gap between owners and renters continued to grow. In 1970, median renter income was 65% of median owner income; by 1979, it had dropped to 55%. As Table 1 shows, there were more renters than owners at the very lowest income levels (below $7,000), while owners outnumbered renters by more than 10:1 in the top income brackets (above $50,000).

The very rapid recent rise in housing costs, particularly for low income renters, is shown in Table 3A. While median rents for all renters rose by 21% in the three years from 1978 through 1980, median rents for very, very low income renters (below $3,000) rose by 38%. Moreover, at all income levels, the proportion of income spent for shelter was rising, although the median was 25% or more only for households with incomes below $15,000.

While housing costs rose generally, both the amount and the impact of the increase was greatest for low income households. For example, while the number of renter households with incomes below $3,000 per year dropped from 5.8 million to 2.9 million between 1970 and 1979, the number of units in the stock at rents they could afford dropped by 75%, from about 5 million to less than 1.5 million.

Thus, there is a wide and growing "housing gap" for very low income people. Even if all other things were perfect -- which we know they are not, there are more than twice as many renter households with incomes below $3,000 as there are rental units available at 25% of their incomes. Even using a 30% rent-income ratio, there is a gap of more than 1.2 million units at the very bottom of the income scale. (See chart, and Tables 1A, 2 and 3).

The impact of these changes in housing costs has been traumatic for renters at the bottom of the income scale. In 1970, there were 5.8 million renter households (24% of all renters) with household incomes below $3,000 per year. Their median rent was less than $85 per month. By 1980, the number of renter households in this bottom bracket had dropped to 2.7 million (still 10% of all renters), but their median rent was $179 per month.

> In 1970, a family with an income of $3,000 who paid the median rent of $85 spent 34% of its income for shelter, and had $165 monthly left over for all other needs.
>
> In 1980, a family with an income of $3,000 who paid the median rent of $179 spent 72% of its income for shelter and had only $71 left over for all other needs.

What are the characteristics of these 2.7 million renter households with such very low incomes?

> 49% were single individuals, but 51% were in households with two or more people, and 5% had five or more.
>
> 13% were married couples; 6% were male-headed households; and 27% were female-headed households. 27% had children of their own under 18, and 6% had three or more.
>
> 20% were single, elderly people; but 29% were single, nonelderly individuals.
>
> 52% had moved within the last year and 84% had moved within the last ten years.
>
> Only 19% lived in subsidized housing.
>
> 59% paid 60% or more of their income for rent. Only 4% paid less than 25%.

46% lived in housing built before 1939.

10% lived in units lacking plumbing facilities. 4% were overcrowded.

29% were black; 8% were of Hispanic origin.

20% lived in the northeast; 27% in north central states; 37% in the south and 16% in the west.

46% lived in central cities; 31% lived in nonmetropolitan areas. All had incomes less than 75% of the poverty level.

These households are the poorest of the poor, but in 1980 they were less than one third of all households with incomes below the poverty level. There were also another 3.3 million renter households with incomes above $3,000, but still below the poverty level, and 4.9 million owner-occupants below the poverty level.

In other words, when we speak of low income housing needs, we are talking about millions of people: 29 million in all, including more than 11 million children (4 million of them under six) and 4 million elderly people.

SOME ACCOMPLISHMENTS OF LOW INCOME HOUSING PROGRAMS

1982 marks the 45th anniversary of the adoption of the U.S. Housing Act of 1937, which established the public housing program. In the ensuing decades, our subsidized housing inventory has risen to about 4.5 million units: 3.4 million through programs of the Department of Housing and Urban Development (HUD) and the rest in rural areas through the Farmers Home Administration (FmHA) of the Department of Agriculture. This is about double the number of units built by the private sector in a single good year.

In contrast, as President Reagan's Commission on Housing has pointed out, there are approximately 20 million households with incomes below 50% of median and more than 30 million households with incomes below 80% of median.

Small wonder, then, than fewer than one quarter of all households with incomes below the poverty level are living in federally assisted housing.

Most subsidized housing assistance has been given to renters, particularly through HUD programs. The Farmers Home Administration has placed more emphasis on home ownership programs. Table 4 gives current estimates on the number of occupied subsidized units. The table includes occupied units provided under all programs of HUD and FmHA.

Yet, despite their inadequate scale, our low income housing efforts have made a critical difference to millions of low income households. While only 11% of all rental units are subsidized, almost three fifths (57%) of the units renting for less than $100 monthly are subsidized, as are one fifth (22%) of the units renting for $100-149. Perhaps more important, as Table 5 shows, subsidized housing provides shelter for almost one quarter of all very poor renter households (incomes below the poverty level). Almost one third (32.7%) of all very poor elderly renters live in assisted housing, as do comparable proportions of very poor black renters (33.1%) and female-headed renter households (31.2%). Very poor Hispanic households and white households are less well served: 17.7% of very poor Hispanic renters and 20.0% of very poor white renters are in subsidized housing. Finally, it should be noted that public housing serves poor renters living in cities better than those elsewhere: 29.4% of very poor renters in central cities live in subsidized housing, compared with 19.4% outside of metropolitan areas.

Perhaps the most reliable, relatively recent data on characteristics of households living in federally assisted housing appears in a recent Census Bureau report on "Characteristics of Households and Persons Receiving Noncash Benefits," containing data from the March 1980 Current Population Survey. The data, which include rental housing assisted under all programs, are summarized in Table 7.

The information belies some widely held assumptions about federally subsidized housing:

Almost three-fifths of the households are white.

Over one-third are elderly.

About two-fifths worked at least part of the time.

> Half had household incomes below $5000. One eighth had household incomes below $2500.

Almost half had incomes below the poverty level and over three-fifths had incomes below 125% of the poverty level.

While only 15% of assisted households consisted of five or more persons, they were among the poorest. Two thirds of the five and six person households and three quarters of the households with seven or more persons had incomes below the poverty level.

THE COST OF FEDERAL LOW INCOME HOUSING PROGRAMS

While there is a great variety of federal housing programs, there are several patterns to the way they are subsidized. It is useful to analyze housing subsidies in terms of three principal components of housing costs: (1) the capital cost of the structure or unit (including site acquisition, site preparation, and the cost of designing and building the housing); (2) financing, since subsidized housing is financed exclusively through long-term loans; and (3) operating costs, including management, utilities, maintenance, and taxes.

Briefly, all of the HUD and FmHA lower income housing programs provide financing subsidies. This is done through tax-exempt bonds (public housing and some Section 8), through payment of part of the interest (Section 235 home ownership, Section 236 rental housing, and the "new" Section 202 housing for elderly and handicapped), or through direct loans (Farmers Home and the "old" 202 program). [For reasons too complex to discuss here, FmHA loans are sometimes referred to as "insured", but the money is borrowed from and repaid to FmHA.]

It has never been possible to provide affordable housing for very low income people (incomes below the poverty level or 50% of median) with financing subsidies alone. Hence, programs which receive only financing subsidies either do not serve low income people or, if they attempt to, run into serious financial problems. (This has been notably true of the 236 rental housing program.)

The primary capital subsidy programs are public housing and Section 8. Under the public housing program, the federal government signs an "annual contributions contract" (ACC) and agrees to pay the principal and interest to retire the bonds financing the projects. Under the Section 8 new construction and substantial rehabilitation programs, the fair market rents on which the subsidy is based reflect the cost of paying off the financing for the project. The cost differential between Section 8 new construction and Section 8 existing can be regarded as a capital subsidy. The Farmers Home Administration has two very small programs which pay partial capital subsidies: the very low income repair grant program and the farm labor housing grant program.

The rent supplement program -- now being phased out -- is similar to Section 8 in that part of the subsidy offsets the cost of retiring the loans to finance the project.

For two decades, operating costs alone have been more than most very low income people can afford at a reasonable percentage of their income. Moreover, operating costs have been rising far more rapidly than incomes. This has forced the provision of operating subsidies for programs serving poor people.

> In public housing, operating subsidies are provided in a separate, line-item appropriation calculated according to a formula which few claim to understand.
>
> The designers of the Section 8 program recognized the need to subsidize operating costs, but relied on market discipline to limit them. Thus, Section 8 contracts are limited by "fair market rents" for comparable unsubsidized housing. [One major problem with this concept is that "comparables" have been hard to find as unassisted rental housing construction has dried up.] Annual adjustments are made to reflect rising costs in the market area.
>
> Other programs which provide funds to cover operating costs are the FmHA rural rental assistance program and HUD's rent supplement program. Rural rental assistance is used together with the 515 1%-interest-rate program; rent supplements have been widely used with the similar HUD 236 program. Section 8 subsidies have also been linked with 236 and 515 projects to make them viable for very low income people.

Not only is housing subsidized in a variety of ways, but it is difficult, in looking at the budget, to get a true picture of subsidized housing costs. The three major elements of "the low income housing budget" are (1) outlays for housing payments; (2) budget authority for additional housing assistance; and (3) authorization of credit for subsidized loans (as well as unsubsidized and insured loans).

The level of housing payments is largely uncontrollable: it is the cumulative cost of all of the contracts for housing assistance ever signed under all of the various subsidy programs which provide long-term assistance. Basically, these payments cover capital and financing costs, along with some operating assistance. In addition, annually appropriated operating subsidies for public housing and some lesser operating subsidies are reflected in these housing payments. They can be reduced only by jeopardizing the viability of housing projects or by raising rents to unaffordable levels.

Budget authority for incremental assistance easily misunderstood. Because assistance is provided under long-term contracts (15-30 years), budget authority is the maximum annual assistance multiplied by the term of the contract. This is equivalent, for an individual, of purchasing a house with a 20-year mortgage and estimating its cost by including all the principal, interest, taxes, maintenance, utilities and other expenses for the 20-year period. Few houses would cost less than $500,000 if calculated that way! The current "overhang" of budget authority represents the cost of commitments under already signed contracts.

Finally, there is the credit authorization, primarily for FmHA loans. There is a separate appropriation each year to reimburse the Rural Housing Insurance Fund for the cost of subsidizing FmHA interest rates and the small losses incurred under FmHA programs.

This review of housing subsidy approaches is essential to understanding both the complexity of housing assistance programs and the manifold HUD and FmHA programs which have been adopted and refined over the years in an effort to find satisfactory approaches to the dilemma of how best to provide adequate housing assistance while avoiding either waste or windfalls.

There has been much rhetoric, particularly in these times of concern about the federal deficit, with the cost of low income housing programs. There is a threefold problem here: (1) to provide adequate levels of assistance; (2) to identify what low income housing really costs; and (3) to avoid waste and unnecessary costs.

There would be no need for low income housing programs if providing shelter did not cost more than low income people can pay. This truism is worth underscoring. Ignoring it leads to efforts to save money by either serving a higher income group -- bypassing the poorest households -- or in cutting back on assistance levels so that projects become unviable. Our present inventory of assisted housing is a valuable national resource which would cost many times as much to replace as it would to maintain it adequately.

Instead of focussing on the high cost of budget authority for low income housing -- a freak of the budget process which seriously jeopardizes our capacity to expand housing assistance -- let us consider how little, after 45 years, we are spending for this major human need.

- Outlays for low income housing assistance have never,in any year, been even 1% of total federal outlays.
- The cost of housing-related tax expenditures to the Treasury in 1981 alone exceeded THE CUMULATIVE OUTLAYS for low income housing assistance under all of the programs of HUD and its predecessor agencies from the adoption of the U.S. Public Housing Act of 1937 through 1981.
- Compared to the anticipated cost of housing-related tax expenditures, primarily home owner deductions, the $250 billion in budget authority committed to long-term contracts for federal housing assistance is almost trivial. Unless constrained, and neither Congress nor the Administration appears inclined to address this issue, foregone revenues for the rest of this century will be many trillions of dollars.

There are ways of reducing the cost of housing assistance for low income people. One of the most effective approaches would be to focus the provision of housing assistance to individual households, on the one hand, and to public, nonprofit, and limited equity housing owners on the other.

THE ADMINISTRATION'S HOUSING PROPOSALS

Last year, low income housing received the largest cut in budget authority of any federal program. This year, again, low income housing bears the brunt of the $56 billion in budget cuts proposed by President Reagan. Measured in "budget authority", or spending commitments, the 1983 budget provides $32 billion less than "current services", or the amount needed to maintain federal programs at their present levels. However, since there is a $30 billion increase above current services in budget authority for national defense, the total cut in all other programs is $62 billion.

$23 billion, or 37%, of this cut comes from low income housing programs. This is by far the largest cut proposed for any activity of the federal government. In fact, it is almost $5 billion more than the combined total of all the other cuts in education, training, employment, social services, health (including Medicare and Medicaid), food stamps, welfare, and other income security, safety net programs. Indeed, the 1983 increase in the military budget could be funded out of the 1982 and 1983 low income housing cuts alone.

In short, the Reagan Administration would reverse the slow progress we have been making in expanding low income housing programs and, instead, curtail the present level of assistance, particularly for new or rehabilitated assisted housing units. It would get rid of many existing subsidized units. And it would raise rents to the point where federally subsidized low income housing may cost more than unsubsidized housing.

If adopted by the Congress, the impact of the budget and legislative proposals would be disastrous for low income people.

o Hundreds of thousands of low income units already approved for subsidy will never be built or rehabilitated, because the subsidy commitments will be withdrawn.

The Administration proposes cancellation of hundreds of thousands of commitments for new or rehabilitated housing units, already approved under the Section 8 and public housing programs. A net total 300,000 of the 700,000 units now "in the pipeline" would be lost forever. This loss comes at a time when the stock of affordable rental housing units is shrinking rapidly and almost one fifth of all construction workers are unemployed.

o Rents for the 3 million families living in lower income housing would be sharply increased. The Administration will propose legislation to require tenants to pay their entire utility bills and to count food stamps as income. [Note: The administration's legislative proposals, transmitted to Congress after this testimony was delivered, did not include establishment of minimum rents. However, we understand that regulations to eliminate "negative rents" (payments to tenants who pay their own utilities and whose utility allowances are higher than their "tenant contribution" or rent). This would have the result of making utility bills the minimum rent for these households. HUD is also preparing regulations to eliminate medical and other deductions from income.] This could double or treble rents for many households. Moreover, present deductions from income would be ended. Rent increases would be phased in over five years (the present 10% cap on rent increases would be raised to 20%).

These proposals hit hardest on very low income people, who receive the maximum food stamp allotments. Their rents would go up by $40 or more. People in states with low welfare grants would be worst off. (See below, and tables, for the impact of this proposal.)

The proposal that tenants pay the full cost of their utilities [where they exceed regular rent due] is even worse, particularly in cold climates or older, poorly insulated projects, where utility bills average well over $100 per month. The National Low Income Housing Coalition, and others, have long contended that subsidized housing residents in fact often pay far more than 25% of their incomes for rent, because of the inadequacy of utility allowances.

Now the Bureau of the Census confirms this view. As Table 5 shows, 16% of households living in subsidized housing paid more than 50% of their incomes for shelter, and one quarter paid more than one-third of their incomes.

We urge Congress to review these facts and actual rent-income ratios and to restore the original intent of the Brooke amendment, which was to limit housing expenditures, including utilities, to 25% of income.

o Federal rent subsidies would be reduced by 15-20% in the Section 8 existing program and tenants would have to pay the extra costs out of their own pockets, along with the increased rents. It would be even harder for large households to find quarters.

This would be done under the "modified Section 8 existing program" by giving certificates that cover the difference between 30% of tenant income and a reduced fair market rent (about 15-20% below present levels because of changes in how it would be calculated). Tenants would then negotiate their own rents, paying less if they could find a place for less; paying the extra if they couldn't.

As proposed by the Administration, this constitutes a hidden rent increase for tenants being switched to the new program. I have queried a broad range of Section 8 housing administrators -- attending two training conferences -- on whether their clients could find housing in their communities at 80% of current fair market rents. Not one thought it would be possible.

Moreover, there is clear evidence, both from the Experimental Housing Allowance Program and the Section 8 existing program, that vouchers can meet only a part of the low income housing needs. They serve households, essentially, whose primary problem is affordability. But they do not provide shelter for households the private market is unwilling or unable to serve: large families, single-parent families, minority families. Even at present fair market rents, half of all households receiving Section 8 certificates are unable to find units within their alloted time period of sixty days. The proportion is far higher for minorities, female-headed households, and households now living in substandard housing.

There is no provision in this new voucher program to provide annual adjustments for rent increases. Expiring Section 8 existing contracts are to be converted to the new program.

- Some public housing projects would have to close. Services and maintenance would have to be curtailed in those remaining open. Several thousand low income families living in public housing would be displaced because their homes would be demolished. The level of operating subsidies for public housing is simply inadequate to maintain it: about two thirds of estimated need.
- Homeowners facing default would no longer receive housing counseling to assist them in retaining their homes. The housing counseling program would be ended.
- 150,000 families living in rent supplement projects would have no assurance, beyond five years, that they would receive housing assistance. Present rent supplement contracts would be ended, and tenants given vouchers instead.
- The rural housing programs of the Farmers Home Administration would be cut to one-third of their present level. They are to be virtually terminated in 1984.

These proposals are made at a time of housing crisis. New production is at its lowest level in two generations. Rents in the private market are beyond the reach of the millions of low income households these programs were intended to help.

In short, the budget proposals offer no hope to low income people: either to those now living in low income housing or to the hundreds of thousands more on the waiting lists. They must be rejected.

THE IMPACT OF COUNTING FOOD STAMPS AS INCOME

In 1979, an estimated 922,850 households living in housing subsidized through the HUD Section 8 and public housing programs received food stamps. This is about half of the total number of households living in these subsidized units. About one third of the food stamp recipients in subsidized housing were elderly; just over half were nonelderly families headed by a woman.

Food stamp recipients are among the poorest low income housing residents. In 1979, 55% had incomes below $3000 and another 30% had incomes between $3000 and $5000. Moreover, 83% of the households living in public housing or Section 8 with incomes below $3000 received food stamps, as did 37.6% of residents with incomes between $3000 and $5000. The proportion of residents with incomes between $5000 and $10000 who received food stamps dropped to 23.7%, while less than 0.1% of residents with incomes above $10,000 also received food stamps. (Source: Derived from information on characteristics of food stamp households in assisted housing contained in "The Impact of Including Housing Assistance as Income in Determining Food Stamp Eligibility and Benefits: Report to the Congress," Food and Nutrition Services, USDA; information on incomes of public housing and Section 8 tenants in 1979 HUD Statistical Yearbook; and information on occupied units in 1981 HUD Budget Summary.)

These facts are doubly significant because the impact of counting food stamps as income falls most heavily on people with the very lowest incomes. As Table 4 shows, both the absolute and relative increases are greatest for tenants with the very lowest incomes. Rents for elderly households with incomes below 10% of median would increase by 42%, and households in this income bracket would have only $70 monthly for all nonhousing expenses.

The impact on larger households in the bottom income bracket is even more startling: rents for households of three to six persons roughly triple, once the increases were fully phased in, and these households would have about $50 left each month for all of their nonhousing needs.

Both the absolute and relative rent increase for households living in assisted housing with incomes between 11-20% of median or 21-30% of median are lower, but the increases would still be substantial for households in the 11-20% of median bracket.

Still another perspective on the impact of the change is provided by a state-by-state analysis, shown in Table 5, of how rents would change for a mother on welfare, who did not work, with two children. In no state is the increase in rent less than 20%; in many states, rents would double, and in Mississippi they would almost quadruple. The biggest absolute and relative increases come in the states with the lowest welfare grants and would exacerbate the already great disparities in income.

Finally, we should note that many assisted housing tenants already are paying far more for rent than the theoretical program models assume. Although rents, including utilities, are supposedly limited to 25% of income, fully one quarter of the residents of assisted housing are paying more than one third of their incomes, when full utility costs are included. 13% are paying 60% or more of their incomes -- compared to 16% of all unsubsidized tenants. If the Administration's proposal to set minimum rents to cover utility costs is adopted, the proportion of low income housing residents with very high cost burdens will rise sharply.

These proposals undermine the very purpose of federal housing assistance programs: to provide low income people with decent housing at affordable rents. Their impact, instead, will be to make unsubsidized housing unaffordable for people who need it most. The result will be that they will be forced to leave, and most of them will have no place to go.

COMMENTS ON H.R. 5731 -- THE "GONZALEZ BILL"

The National Low Income Housing Coalition welcomes the effort to design a counterproposal which will effectively address our current housing situation. We hope that this will be a bipartisan and ultimately successful effort.

While we generally endorse the direction of the Gonzalez bill, we recommend a number of changes:

- Considering the enormous needs of low income people, the level of low income housing assistance should be increased.
- Funds should be provided for Section 8 new construction and rehabilitation, at least sufficient to maintain present commitments and to provide additional Section 8 assistance to nonprofit, limited equity, and community based housing organizations so they can continue their low income housing activities.
- Rental housing production should be given greater emphasis than single family production. Moreover, the rental housing production program proposed in H.R. 5731 should be improved by (1) requiring that 40% of the units provided be subsidized for lower income households; (2) giving clear priority to proposals which provide higher levels for lower income people; (3) requiring that all lower income units remain as rental units for 30 years unless sold, under limited equity arrangements, to their occupants.

We urge your adoption of these recommendations and look forward to working with the Committee as it considers this important legislation.

WHERE NEXT: SOME LONG-RANGE PROPOSALS

The National Low Income Housing Coalition believes that our national housing policy must start with the principle that affordable access to housing is a basic human right. This right must be firmly established as the basis for federal housing policy and programs. We believe the federal government has a fundamental responsibility to assure that everyone living in this country is able to obtain decent housing at affordable costs.The federal resources necessary to make this right a reality for low income people can and should be provided. To this end, we support:

- Adoption of an adequately funded entitlement, income based housing assistance program to enable low income people to obtain decent housing at costs they can afford.

- Expansion of production and preservation programs to meet those low income housing needs which cannot be met by an income-support program alone.

- A strong reaffirmation of the federal government's rolein guaranteeing fair access to housing by all citizens, including strengthening of the federal fair housing law and its enforcement.

- Restructuring tax policy to shift budgetary resourcesfrom those who have to those who do not. The federal cost of housing-related income tax expenditures now tops $40 billion annually -- more than five times the cost of housing assistance presently provided for low income people. The bulk of these tax expenditures benefit people in the top quarter of the income distribution.

- A strong role for community based, nonprofit organizations, in the implementation of housing programs, along with the availability of federal assistance to meet a broad range of housing needs at the neighborhood and community level.

- A strong reaffirmation of the federal government's continuing commitment to retaining the current stock of federally assisted and insured housing, now occupied by low and moderate income people, for their use. This includes all present public housing, HUD-assisted, HUD-insured, and HUD-held units, as well as units assisted by the Farmers Home Administration. The necessary funds should be provided to maintain this housing in viable condition.

- Modification of monetary and credit policies to counteract the high financing costs for housing and the credit-related sharp fluctuations in residential construction which increase the costs, prices, and rents of all housing.

- A strong reaffirmation of the responsibility of the federal government to bring its resources to bear to prevent displacement of low income people from their homes and neighborhoods by either public or private action.

We urge this committee to remember that housing is more than bricks and mortar. Our housing is where we live: it shapes our lives, our families, and our communities.

The importance which we give to housing reflects our values as a society. Do we care that millions of children must live in homes and neighborhoods that violate basic standards of safety and decency? Do we care that millions of old people must end their lives without dignity or the assurance of a sound roof over their heads and heat in their homes? Do we still believe that the federal government must play a role in ending injustice, and in providing resources and assistance where no one else can do so? The National Low Income Housing Coalition is convinced that the answers to these questions can and must be "YES".

THE HOUSING BUDGET AND LOW INCOME NEEDS

ACCOMPANYING TABLES

TABLE 1. Income distribution for owners and renters, by race, 1980. (Households in thousands).

Income	Owners	Renters		
		All	Black	Hispanic
$3,000 or less	2,155	2,748	788	232
$3,000-6,999	5,750	6,479	1,483	616
$7,000-9,999	4,367	3,862	697	422
$10,000-14,999	7,217	5,553	841	519
$15,000-19,999	6,977	3,672	477	264
$20,000-24,999	6,707	2,263	264	156
$25,000-34,999	9,814	1,984	203	101
$35,000-49,999	6,002	699	61	29
$50,000-74,999	2,445	207	13	4
$75,000 or more	1,082	88	-	6
Total	52,516	27,556	4,827	2,349
Median	$19,800	$10,600	$7,600	$9,300

Source: 1980 Annual Housing Survey, Part C, Financial Characteristics of the Inventory.

TABLE 1A. MONTHLY SHELTER COST AT 25% AND 30% OF INCOME FOR SELECTED INCOME LEVELS

Income	25%	30%
$3,000	$62	$75
$7,000	146	175
$10,000	208	250
$15,000	312	375
$20,000	417	500
$25,000	521	625
$35,000	729	875
$50,000	1042	1250
$75,000	1562	1875

TABLE 2. RENTER HOUSEHOLDS AND AFFORDABLE UNITS AT 25% RENT-INCOME RATIO, 1980.

Income	Households	Units	Gap/Surplus	Cumulative
$3,000 or less	2,748	1,301	-1,447	-1,447
$3,000-6,999	6,479	3,807	-2,672	-4,119
$7,000-9,999	3,862	5,415	+1,553	-2,566
$10,000-14,999	5,553	9,920	+4,367	+1,801
$15,000-19,999	3,672	4,576	+904	+2,705
$20,000-24,999	2,263	1,503	-760	+1,945
$25,000-34,999	1,984	814	-1,170	+775
$35,000 or more	994	215	-775	0
Total	27,556	27,556	-	-

Source: Estimated by NLIHC from data in Annual Housing Survey, Part C, Financial Characteristics of the Inventory.

TABLE 3. RENTER HOUSEHOLDS AND AFFORDABLE UNITS AT 30% RENT-INCOME RATIO, 1980.

Income	Households	Units	Gap/Surplus	Cumulative
$3,000 or less	2,748	1,513	-1,235	-1,235
$3,000-6,999	6,479	5,694	-785	-2,020
$7,000-9,999	3,862	7,496	+3,634	+1,614
$10,000-14,999	5,553	9,012	+3,459	+5,073
$15,000-19,999	3,672	2,545	-1,127	+3,946
$20,000-24,999	2,263	791	-1,472	+2,424
$25,000 or more	2,978	504	-2,494	0
Total	27,556	27,556	-	-

Source: Ibid.

TABLE 3A. CHANGES IN MEDIAN RENTS AND MEDIAN RENT-INCOME RATIOS

Income	Median Rent			Median rent-income ratio		
	1980	1979	1978	1980	1979	1978
$3,000 or less	$179	$147	$130	72+%	60+%	60+%
$3,000-6,999	187	172	165	47	44	42
$7,000-9,999	222	205	193	32	31	29
$10,000-14,999	249	232	214	25	24	22
$15,000-19,999	274	252	233	20	18	17
$20,000-24,999	296	277	256	17	16	14
$25,000-34,999	327	303	284	14	13	13
$35,000-49,999	362	337	326	12	11	11
$50,000-74,999	393	401	347	9-	10-	8-
$75,000 or more	423	359	283	7-	6-	5-
All renters	241	217	200	27	26	25

Source: Ibid. Ratios above 60% or below 10% are NLIHC estimates.

TABLE 4 ESTIMATED SUBSIDIZED UNITS AS OF SEPTEMBER 30, 1981

Agency	Program	Units
HUD	Public housing	1,204,000
	202 housing for elderly and handicapped (original program)	44,392
	Revised program (post-1974)	55,994
	Rent supplements	157,779
	236 rental housing assistance	537,206
	Section 8 housing assistance payments	1,318,927
	Subtotal, rental housing	3,318,298
	Less 202 units also receiving Section 8	-55,994
	Less estimated 236 units also receiving Section 8 assistance	-95,000
	Less estimated 236 units also receiving rent supplement assistance	-66,000
	Net rental units	3,101,304
	235 home ownership assistance	
	Old program (pre-1974)	158,226
	Revised program	82,313
	Net home ownership units	240,539
	Total HUD-subsidized units	3,341,843
FmHA	515 rental housing (estimated units)	210,000
	502 home ownership loans	1,639,309
	504 very low income repair grants	39,269
	Subtotal, home ownership	1,678,578
	Less estimated unsubsidized 502	-540,000
	Net FmHA home ownership units	1,138,578
	Project loans and grants:	
	Rural rental assistance (with 515)	1,517
	Farm labor housing loans (514)	1,395
	Farm labor housing grants (516)	188
	Site loans (524)	165
	Self-help housing grants	348
	Supervisory/technical assistance (525)	57
	Total FmHA*	1,151,000
	GRAND TOTAL	4,493,000

* Includes rough estimate of net units provided through project loans and grants (primarily farm labor housing, since other project loans listed here are coupled with 515 or 502 assistance).

Source: Estimated from HUD, FmHA and CRS sources.

TABLE 5 HOUSEHOLDS SERVED BY ASSISTED RENTAL HOUSING PROGRAMS

	Total	Below Poverty Levels	
		Below 100%	Below 125%
All households			
Total	82,368	10,968	15,557
Renter-occupied	16,487	6,063	8,153
Living in subsidized housing	2,777	1,430	1,866
Percent of renters	10.4%	23.6%	22.9%
Households with children under 18 years old			
Total	34,329	4,928	6,607
Renters	10,036	3,126	3,949
Living in subsidized housing	1,297	787	917
Percent of renters	12.9	25.2	23.2
Householder 65 or over			
Total households	16,912	3,188	5,137
Renters	4,128	1,237	1,931
Living in subsidized housing	956	405	652
Percent of renters	23.2%	32.7%	33.8%
White householder			
Total households	71,872	7,828	11,593
Renters	21,135	3,934	5,549
Living in subsidized housing	1,612	745	1,029
Percent of renters	7.6%	20.0%	18.5%
Black householder			
Total households	8,847	2,864	3,588
Renters	4,618	1,941	2,383
Living in subsidized housing	1,075	643	771
Percent of renters	23.6%	33.1%	32.8%
Spanish-origin householder			
Total households	3,906	956	1,317
Renters	2,085	685	908
Living in subsidized housing	223	121	155
Percent of renters	10.7%	17.7%	17.1%

	Total	Below Poverty Levels Below 100%	 Below 125%
Inside central cities			
Total households	24,473	4,106	5,743
Renters	11,343	2,878	3,895
Living in subsidized housing	1,534	846	1,091
Percent of renters	13.5%	29.4%	28.0%
Outside metropolitan areas			
Total households	26,296	4,224	5,935
Renters	6,526	1,801	2,357
Living in subsidized housing	688	349	459
Percent of renters	10.5%	19.4%	19.4%
Female-headed household			
Total	9,082	2,972	3,666
Renters	4,529	2,112	2,492
Living in subsidized housing	1,029	674	771
Percent of renters	22.7%	31.2%	30.9%

Source: Current Population Reports, "Characteristics of Households Receiving Noncash Benefits, 1980," CPR P-60, No. 128.

TABLE 6 . COMPARISON OF RENT-INCOME RATIOS FOR SUBSIDIZED AND UNSUBSIDIZED HOUSING TENANTS, 1980

Rent-income ratio	Subsidized No.	 %	Unsubsidized No.	 %
Under 10 percent	117	4.0	1,114	5.1
10-14 percent	228	7.8	2,605	11.8
15-19 percent	445	15.1	3,570	16.8
20-24 percent	664	22.6	3,153	15.9
25-34 percent	644	22.6	4,269	20.5
35-49 percent	292	10.0	3,207	14.6
50-59 percent	91	3.1	1,149	5.2
60 percent or more	385	13.1	3,358	15.6
Not computed	65	2.2	1,518	6.6
Total	2,932	25	23,942	27

TABLE 7 1980 CHARACTERISTICS OF HOUSEHOLDS LIVING IN SUBSIDIZED RENTAL HOUSING. (Households in thousands.)

CHARACTERISTICS	TOTAL	MED.INC.	-100% POV	%	-125%	%
ALL HOUSEHOLDS	2511	$4978	1170	46.5%	1573	62.6
INSIDE METRO AREAS	1858	4959	867	46.6	1176	6[illegible].2
INSIDE CENTRAL CITIES	1373	4880	692	50.4	921	6[illegible].0
OUTSIDE CENTRAL CITIES	485	5386	175	36.0	256	52.7
OUTSIDE METRO AREAS	653	5078	302	46.2	397	60.7
NORTHEAST	794	6172	279	35.1	415	52.2
NORTH CENTRAL	538	4696	276	51.3	349	64.8
SOUTH	809	4617	476	58.8	583	72
WEST	370	4651	139	37.5	227	61.3
WHITE	1473	4822	592	40.1	863	58.5
BLACK	967	5367	549	56.7	671	69.3
SPANISH ORIGIN	202	6146	99	49.0	126	62.3
FAMILY HOUSEHOLDS	1491	6812	718	48.1	894	59.9
MARRIED COUPLES	596	9507	151	25.3	230	38.5
MALE HOUSEHOLDER	28	0	8	28.5	15	53.5
FEMALE HOUSEHOLDER	867	5325	558	64.3	650	74.9
NONFAMILY HOUSEHOLDS	1020	3955	452	44.3	680	66.6
MALE HOUSEHOLDER	28	0	8	28.5	15	53.5
FEMALE HOUSEHOLDER	792	3845	363	45.8	542	68.4
HOUSEHOLDER AGED 15-24	289	6227	143	49.4	174	60.2
AGED 25-34	543	6708	269	49.5	337	62.0
AGED 35-44	339	7100	180	53.0	210	61.9
AGED 45-54	221	6286	104	47.0	136	6[illegible].5
AGED 55-64	256	4720	125	48.8	164	[illegible].0
65 OR OVER	863	4087	349	40.4	552	63.9
SINGLE PERSONS	980	3892	443	45.2	662	67.5
TWO PERSONS	494	6425	171	34.6	235	47.5
THREE PERSONS	436	6758	186	42.6	241	55.2
FOUR PERSONS	277	7054	147	53.0	178	64.2
FIVE PERSONS	159	6861	107	67.2	124	77.9
SIX PERSONS	83	4245	54	65.0	63	75.9
SEVEN OR MORE	82	8895	62	75.6	71	86.5
MEMBERS UNDER 19	1173	6475	659	56.1	797	67.9
TOTAL PEOPLE	2680	6516	1711	63.8	2007	74.8
WORKED IN 1979	989	8283	312	31.5	434	43.8
DID NOT WORK	1456	3981	854	58.6	1128	77.4

Source: "Characteristics of Households and Persons Receiving Noncash Benefits, 1979 (Preliminary data from the March 1980 Current Population Survey)," Table 5. Bureau of the Census, Current Population Reports, Series p-23, No. 110.

TABLE 7 CONT'D. CHARACTERISTICS OF HOUSEHOLDS IN SUBSIDIZED RENTAL HOUSING, 1980 (Percent distribution).

CHARACTERISTICS	TOTAL	MED.INC.	BELOW 100% POV.	BELOW 125% POV
ALL HOUSEHOLDS	100%	100%	100%	100%
INSIDE METRO AREAS	73.9	99.6	74.1	74.7
INSIDE CENTRAL CITIES	54.6	98.0	59.1	58.5
OUTSIDE CENTRAL CITIES	19.3	108.1	14.9	16.2
OUTSIDE METRO AREAS	26.0	102.0	25.8	25.2
NORTHEAST	31.6	123.9	23.8	26.3
NORTH CENTRAL	21.4	94.3	23.5	22.1
SOUTH	32.2	92.7	40.6	37.0
WEST	14.7	93.4	11.8	14.4
WHITE	58.6	96.8	50.5	54.8
BLACK	38.5	107.8	46.9	42.6
SPANISH ORIGIN	8.0	123.4	8.4	8.0
FAMILY HOUSEHOLDS	59.3	136.8	61.3	56.8
MARRIED COUPLES	23.7	190.9	12.9	14.6
MALE HOUSEHOLDER	1.1	—	.6	.9
FEMALE HOUSEHOLDER	34.5	106.9	47.6	41.3
NONFAMILY HOUSEHOLDS	40.6	79.4	38.6	43.2
MALE HOUSEHOLDER	1.1	—	.6	.9
FEMALE HOUSEHOLDER	31.5	77.2	31	34.4
HOUSEHOLDER AGED 15-24	11.5	125	12.2	11.0
AGED 25-34	21.6	134.7	22.9	21.4
AGED 35-44	13.5	142.6	15.3	13.3
AGED 45-54	8.8	126.2	8.8	8.6
AGED 55-64	10.1	94.8	10.6	10.4
65 OR OVER	34.3	82.1	29.8	35.0
SINGLE PERSONS	39.0	78.1	37.8	42.0
TWO PERSONS	19.6	129.0	14.6	14.9
THREE PERSONS	17.3	135.7	15.8	15.3
FOUR PERSONS	11.0	141.7	12.5	11.3
FIVE PERSONS	6.3	137.8	9.1	7.8
SIX PERSONS	3.3	85.2	4.6	4.0
SEVEN OR MORE	3.2	178.6	5.2	4.5
MEMBERS UNDER 19 TOTAL PEOPLE	46.7	130.0	56.3	50.6
WORKED IN 1979	39.3	166.3	26.6	27.5
DID NOT WORK	57.9	79.9	72.9	71.7

SOURCE: CHARACTERISTICS OF HOUSEHOLDS AND PERSONS Source: "Characteristics of Noncash Benefits, 1979 (Preliminary data from the March 1980 Current Population Survey)," Table 5. Bureau of the Census, Current Population Reports, Series p-23, No. 110.

TABLE 8 IMPACT ON RENTS OF COUNTING FOOD STAMPS AS INCOME, SECTION 8 TENANTS, 1981 INCOME FIGURES.

FOR PRESENT TENANTS WITH RENTS AT 26% OF INCOME

TENANTS WITH INCOMES OF UNDER 10% OF MEDIAN

HOUSEHOLD SIZE	GROSS INCOME	OLD RENT	NEW RENT	$ INCREASE	% INCREASE	$ REMAINING
ONE	1242	26.28	36.4	10.12	38.5	67.09
TWO	1196	19.13	44.63	25.5	133.2	55.03
THREE OR FOUR	1459	18.23	69.32	51.09	280.2	52.26
FIVE OR SIX	1704	21.3	96.54	75.24	353.2	45.46
NINE OR MORE	1838	22.97	98.21	75.24	327.5	54.95
ELDERLY	1242	24.07	34.19	10.12	42	69.31

TENANTS WITH INCOMES OF 11-20 PERCENT OF MEDIAN

HOUSEHOLD SIZE	GROSS INCOME	OLD RENT	NEW RENT	$ INCREASE	% INCREASE	$ REMAINING
ONE	2280	48.33	51.71	3.38	6.9	138.29
TWO	2311	42.94	61.19	18.25	42.5	131.39
THREE OR FOUR	2707	42.94	85.92	42.98	100	139.66
FIVE OR SIX	3051	38.13	104.61	66.48	174.3	149.64
NINE OR MORE	3582	44.77	111.25	66.48	148.4	187.25
ELDERLY	2326	47.88	50.96	3.08	6.4	142.87

TENANTS WITH INCOMES OF 21-30 PERCENT OF MEDIAN

HOUSEHOLD SIZE	GROSS INCOME	OLD RENT	NEW RENT	$ INCREASE	% INCREASE	$ REMAINING
ONE	3348	70.76	70.76	0	0	208.24
TWO	3740	73.49	82.46	8.97	12.2	229.2
THREE OR FOUR	4506	81.42	112.71	31.29	38.4	262.79
FIVE OR SIX	5308	83.95	135.76	51.81	61.7	306.57
NINE OR MORE	5914	73.92	125.73	51.81	70	367.1
ELDERLY	3314	68.25	68.25	0	0	207.91

TABLE 9

ESTIMATED IMPACT ON RENTS OF COUNTING FOOD STAMPS
AS INCOME FOR WELFARE MOTHER WITH TWO CHILDREN
USING 1982 AFDC AND FOOD STAMP GRANTS

STATE	AFDC GRANT	FOOD STAMPS	OLD RENT	NEW RENT	DOLLAR INCREASE	% INCREASE	INCOME REMAINING
ALABAMA	$118	$183	$17.68	$65.26	$47.58	269.1%	52.74
ARIZONA	202	164	39.52	82.16	42.64	107.8	119.84
ARKANSAS	122	183	18.72	66.30	47.58	254.1	55.70
CALIFORNIA	506	73	118.56	137.54	18.98	16.0	368.46
COLORADO	313	131	68.38	102.44	34.06	49.8	210.56
CONNECTICUT	427	97	98.02	123.24	25.22	25.7	303.76
DELAWARE	266	145	56.16	93.86	37.70	67.1	172.14
DIST/COL	300	135	65.00	100.10	35.10	53.9	199.9
FLORIDA	209	162	41.34	83.46	42.12	101.8	125.54
GEORGIA	183	170	34.58	78.78	44.20	127.8	104.22
IDAHO	314	131	68.64	102.70	34.06	49.6	211.30
ILLINOIS	302	134	65.52	100.36	34.84	53.1	201.64
INDIANA	255	149	53.30	92.04	38.74	72.6	162.96
IOWA	360	117	80.60	111.02	30.42	37.7	248.98
KANSAS	328	127	72.28	105.30	33.02	45.6	222.70
KENTUCKY	188	169	35.88	79.82	43.94	122.4	108.18
LOUISIANA	190	168	36.40	80.08	43.68	120.0	109.92
MAINE	301	135	65.26	100.36	35.10	53.7	200.64
MARYLAND	270	144	57.20	94.64	37.44	65.4	175.33
MASSACHUSETTS	379	111	85.54	114.4	28.86	33.7	264.69
MICHIGAN	395	107	89.70	117.52	27.82	31.0	277.48
MINNESOTA	446	91	102.96	126.62	23.66	22.9	319.33
MISSISSIPPI	96	183	11.96	59.54	47.58	397.8	36.46
MISSOURI	248	151	51.48	90.74	39.26	76.2	157.26
MONTANA	306	133	66.56	101.14	34.58	51.9	204.86
NEBRASKA	350	120	78.00	109.20	31.20	40.0	240.80
NEW HAMPSHIRE	346	121	76.96	108.42	31.46	40.8	237.58
NEW JERSEY	360	117	80.60	111.02	30.42	37.7	248.98
NEW MEXICO	248	151	51.48	90.74	39.26	76.2	157.26
NEW YORK	424	98	97.24	122.72	25.48	26.2	301.
N. CAROLINA	192	157	36.92	80.34	43.42	117.6	111.
N. DAKOTA	357	118	79.82	110.50	30.68	38.4	246.

STATE	AFDC GRANT	FOOD STAMPS	OLD RENT	NEW RENT	DOLLAR INCREASE	% INCREASE	INCOME REMAINING
OHIO	$263	$146	$55.38	$93.34	$37.96	68.5%	$169.66
OKLAHOMA	282	140	60.32	96.72	36.4	60.3	185.28
OREGON	321	129	70.46	104.00	33.54	47.6	217.00
PENNSYLVANIA	318	130	69.68	103.48	33.8	48.5	214.52
RHODE ISLAND	453	89	104.78	127.92	23.14	22.0	325.08
S. CAROLINA	133	183	21.58	69.16	47.58	220.4	63.84
S. DAKOTA	321	129	70.46	104.00	33.54	47.6	217.00
TENNESSEE	122	183	18.72	66.30	47.58	254.1	55.70
TEXAS	118	183	17.68	65.26	47.58	269.1	52.74
UTAH	367	115	82.42	112.32	29.9	36.2	254.68
VERMONT	477	82	111.02	132.34	21.32	19.2	344.66
VIRGINIA	255	149	53.30	92.04	38.74	72.6	162.96
WASHINGTON	440	93	101.40	125.58	24.18	23.8	314.42
WEST VIRGINIA	206	163	40.56	82.94	42.38	104.4	123.06
WISCONSIN	473	83	109.98	131.56	21.58	19.6	341.44
WYOMING	315	131	68.90	102.96	34.06	49.4	212.04

SOURCE: Calculated by National Low Income Housing Coalition from information on welfare and food stamp grants contained in "Profiles of Families in Poverty: Effects of the FY 1983 Budget Proposals on the Poor" by Tom Joe, Center for the Study of Social Policy, February 1982. Rent is assumed to be 26% of income, with $300 annually deducted from income for each dependent.

ALLOCATIONS OF ASSISTED HOUSING BY STATE
ESTIMATED IMPACT OF LATTA BUDGET LEVEL
(LOSSES IN MILLIONS OF DOLLARS)

STATE	ESTIMATED % OF ALL HSG #	ESTIMATED 1983 LOSS	ESTIMATED 1983-85 LOSS
ALABAMA	1.6	368	924.784
ALASKA	.2	46	115.598
ARIZONA	.8	184	462.392
ARKANSAS	1.1	253	635.789
CALIFORNIA	10.7	2461	6184.493
COLORADO	1.1	253	635.789
CONNECTICUT	1.7	391	982.583
DELAWARE	.3	69	173.397
FLORIDA	3.1	713	1791.769
GEORGIA	2	460	1155.98
HAWAII	.3	69	173.397
IDAHO	.3	69	173.397
ILLINOIS	4.2	966	2427.558
INDIANA	2.1	483	1213.779
IOWA	1	230	577.99
KANSAS	.6	138	346.794
KENTUCKY	1.6	368	924.784
LOUISIANA	1.5	345	866.985
MAINE	.8	184	462.392
MARYLAND	2	460	1155.98
MASSACHUSETTS	3.5	805	2022.965
MICHIGAN	3.2	736	1849.568
MINNESOTA	1.9	437	1098.181
MISSISSIPPI	1.1	253	635.789
MISSOURI	2.2	506	1271.578
MONTANA	.3	69	173.397
NEBRASKA	.6	138	346.794
NEVADA	.4	92	231.196
NEW HAMPSHIRE	.6	138	346.794
NEW JERSEY	3.7	851	2138.563
NEW MEXICO	.5	115	288.995
NEW YORK	11.7	2691	6762.483
NORTH CAROLINA	2.5	575	1444.975
NORTH DAKOTA	.2	46	115.598
OHIO	4.3	989	2485.357
OKLAHOMA	1.2	276	693.588
OREGON	1.2	276	693.588
PENNSYLVANIA	4.3	989	2485.357
RHODE ISLAND	.8	184	462.392
SOUTH CAROLINA	1.1	253	635.789
SOUTH DAKOTA	.4	92	231.196
TENNESSEE	1.4	322	809.186
TEXAS	4.4	1012	2543.156
UTAH	.3	69	173.397
VERMONT	.4	92	231.196
VIRGINIA	2.1	483	1213.779
WASHINGTON	1.3	299	751.387
WEST VIRGINIA	.8	184	462.392
WISCONSIN	1.8	414	1040.382
WYOMING	.1	23	57.799
DIST/COLUMBIA	.5	115	288.995
GUAM	0	0	0
PUERTO RICO	1.9	437	1098.181

STATEMENT OF JAMES M. HACKING, ASSISTANT LEGISLATIVE COUNSEL, NATIONAL RETIRED TEACHERS ASSOCIATION

ACCOMPANIED BY JO REID, LEGISLATIVE REPRESENTATIVE

STATEMENT HIGHLIGHTED

Senator D'AMATO. Mr. James Hacking, assistant legislative counsel, National Retired Teachers Association.

Mr. Hacking, if you could also summarize your statement, your testimony will be placed into the record as if read in its entirety.

Mr. HACKING. Thank you, Senator. I would like to introduce my colleague, this is Jo Reid, one of our legislative representatives.

We are here representing both the NRTA and AARP, which today have a collective membership well in excess of 13 million people, age 55 and older.

I would like to premise my remarks, Senator, by stating that for much of the year so far, most of the resources that we have for intervention in the legislative process here on Capital Hill have been observed in the ongoing debate over the size and shape of the Federal budget and I guess that is because the association feels that probably the worst thing that could happen is that we end up with political confrontation and no budget, or a budget that includes very large and even escalating deficits in the distant future. We think that the economy needs to be revived and we think that the budget and the whole budget process is very important to that economic resolve.

PROGRAMS FOR ELDERLY CUT

My colleagues and I are here today to demonstrate our continuing concern over major cuts in the budget that includes programs of importance to the elderly. That is so in the case of housing and I am sure you can understand how if you realize that elderly households constitute one-third of all households receiving some form of Federal assistance. The elderly and the low income have a vital interest in proposals to change this Federal housing assistance program.

The administration proposed a major restructuring and reduction of Federal support for low-income housing for fiscal year 1983.

The net effect of the proposed cutbacks would be to eliminate most future constructions and most rehabilitation of assisted housing units, except in the case of the section 202 program, which would be reduced by 45 percent.

Congregate housing for the elderly would be defunded. At the same time, the current section 8 rental assistance program would be converted to a form of vouchers.

ASSOCIATION RECOMMENDATION

The association recommendation with respect to section 202 public housing, section 8 and public housing and the proposed vouchers are as follows, and I will summarize:

We strongly support the continuation of section 202 program. It is perhaps the most successful housing program ever developed to serve the elderly. The administration recommends new lending authority for section 202 be set at $453 million, about enough to fund an estimated 10,000 units. We do not think that is enough. We recommend that section 202 lending authority be fixed at a level to fund at least 17,000 units with approximately the same number as in fiscal year 1982.

The association further recommends that the housing services program be funded at $10 million. The program was established in 1978 to prevent the unnecessary premature institutionalization of elderly and handicapped persons who have some functional disabilities.

Nearly 40 congregate housing projects have become operational since then, served 1,600 aged and handicapped individuals.

The association believes that congregate services should be a major building block in the Nation's housing strategy for the at-risk older Americans who otherwise end up in nursing homes and, ultimately, at significant higher Government expense.

With respect to the public housing, the section 8 programs, we will point out they account for 40 percent of all HUD-subsidized units occupied by the elderly. Yet it is these programs which have been slated for elimination by the administration.

We think the administration's policy goes in the wrong direction.

Unsubsidized private rental housing construction has dried up, according to many housing experts. Financing subsidies alone have never generated adequate, affordable housing for very low income people. Thus, we believe it is imperative that the Federal Government continue to play a significant role in assisting housing construction for low-income people, both through financing subsidies and through capital subsidy programs.

The administration's fiscal year 1983 budget calls for a little over a billion in outlays for public housing operating subsidies, roughly $27 million less than what was spent in fiscal year 1981.

We believe that full funding of public housing operating subsidies—at least at the fiscal year 1982 level, $1.3 million—is essential. This will help arrest deterioration of public housing stock and can help to create a safer environment for elderly tenants.

Finally, with respect to the administration's proposed conversion of the existing section 8 program into a modified section 8, or voucher plan, the association feels that any such conversion will be premature and potentially devastating for elderly tenants of assisted rental housing.

We believe the present section 8 rent assistance program should be maintained at no less than the fiscal year 1982 funding levels until the voucher approach or some other housing plan is actually tested to be superior and workable.

We are not against the concept of a voucher; our concern is that the program should be tested and demonstrated before any attempt is made to switch from what already exists to something new.

That concludes my remarks, Mr. Chairman, and we thank you for having had this opportunity to present them.

Senator D'AMATO. Thank you. I share your concern in terms of housing for the elderly in particular, and make note of your reference to the

202 program, which I think is an excellent program, and which could utilize some additional help. However, you do recognize the budget constraints in which we operate.

I am a Senator that has tried to balance the incredible needs and demands of my constituency, which is an elderly one in many cases, has more in the way of poverty than others in the country, and which has particular needs for housing, while also recognizing the budget constraints and the ever-present threat of the Presidential veto. So it was not an easy task to come forward with a program that met some of the guidelines. But rest assured that I certainly will be mindful of some of the things you pointed out.

Mr. Hacking. Thank you.

[The statement follows:]

STATEMENT OF THE NATIONAL RETIRED TEACHERS ASSOCIATION AND THE AMERICAN ASSOCIATION OF RETIRED PERSONS

Federally subsidized housing programs are of great importance to the elderly, and particularly to low income elderly persons who are renters. Of the 3.1 million households being served by HUD renter programs by the end of 1980, 40% (or 1.2 million) were headed by elderly persons.[1] When all federally subsidized housing programs are considered (including those for homeowners), elderly households still constitute a hefty one-third of all households receiving aid.[2] Consequently, older persons have a vital interest in proposals for changes in federal housing assistance programs.

Administration Proposals

A major restructuring and reduction of federal support for low-income housing has been proposed by the Administration for fiscal year 1983. Federal programs to help low income families obtain adequate and affordable housing would be cut by $23 billion -- an especially significant reduction following last year's 28% cut in spending authority for many of these same programs.

The net effect of the proposed cutbacks would be to eliminate all future construction and most rehabilitation of assisted housing units (except for Section 202 for the Elderly and Handicapped, which would be reduced by 45%). Congregate housing for the elderly would be defunded. At the same time, the current Section 8 Rental Assistance Program would be converted to a form of "vouchers" through technical modifications and benefit changes.

Following are the Associations' recommendations with respect to Section 202; Congregate Housing; Section 8 and Public Housing; and the proposed "voucher" plan.

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[1] Source: Raymond Struyk, Urban Institute

[2] Source: March 1980 Current Population Survey, cited by National Low Income Housing Coalition

Section 202 Housing for the Elderly and Handicapped

The Associations strongly support the continuation of the Section 202 Housing for the Elderly and Handicapped Program. Section 202 is perhaps the most successful and popular housing program ever developed for older Americans.

Congress established Section 202 in 1959. The program, as you know, has provided direct loans to nonprofit sponsors -- such as churches and national aging organizations -- to build housing tailor-made for older Americans and handicapped persons.

Section 202 housing includes several design features to accommodate the special needs of older and handicapped persons, including nonslip floors, lower shelves, and emergency call systems. These devices oftentimes make it possible for elderly and handicapped people to continue to live independently.

Section 202 has been a model of efficiency and excellence throughout its 23-year history. Approximately 150,000 units are occupied or in development. The program has only had one foreclosure during its entire history.

One measure of the success of Section 202 is that it is the only new construction program funded in the Administration's fiscal year 1983 budget. The Administration recommends that new lending authority for Section 202 be set at $453 million. This, however, would fund only an estimated 10,000 units.

Our Associations recognize that the Nation is in an austere period. We are recommending that the Section 202 lending authority be fixed at a level to fund at least 17,000 units, approximately the same number as in fiscal year 1982. This funding level is necessary because the elderly's housing needs are increasing rapidly. Each day about 5,000 persons turn

65 years old, and about 3,400 older Americans die. This produces a daily net increase of 1,600 or about 600,000 on an annualized basis.

Today there are nearly 26 million persons 65 or older. Many are in practically an impossible housing situation. Rapidly rising energy costs, maintenance expenses, and property taxes are making it difficult for older persons to remain in their homes. Yet, they cannot find suitable alternative housing at a price within their reach. Section 202, however, has helped to close this gap. It has also provided quality housing at a reasonable price for our Nation and for elderly tenants. And, it has enabled older Americans to live independently in a home environment.

Congregate Housing Services Program

The Associations further recommend that the congregate housing services program be funded at $10 million. Congress established the congregate housing services program in 1978 to prevent the unnecessary institutionalization of elderly and handicapped persons who have some functional disabilities.

Nearly 40 congregate housing services projects have become operational since 1978, and they are serving about 1,600 aged and handicapped individuals. Preliminary information collected from the Department of Housing and Urban Development and the American Association of Homes for the Aged provides clear and convincing evidence that congregate services are an effective means to prevent premature institutionalization

This program, of course, has important financial dividends because the cost of nursing home care has become enormously burdensome for older Americans, their families, and the Nation. Given that anywhere from 15 to 40 percent of all nursing home residents do not need full institutional care, but simply require basic social services, such as meals, housekeeping, or personal care, the availability of congregate services becomes even more important. The Associations believe that congregate services should be a cornerstone in our Nation's housing strategy to improve the quality of life for "at risk" older Americans who may wind up in a nursing home at a significantly higher public expense.

A great need already exists for congregate housing. The 75-plus population is one of the fastest growing age groups in our society. The number of persons 75 or older increased by 31 percent during the past decade. This age group is expected to jump by 51 percent from 1980 to 2005, or more than four times the projected 12-percent increase for people 65 to 74 years old.

These older elderly persons, of course, run a much greater risk of being institutionalized. But they can live independently in their own communities if we respond with an appropriate and timely strategy to meet their special needs. Congregate housing provides a humane and economical means to implement this objective.

New Construction: Public Housing/Section 8

Although Section 202 is an extremely valuable and visible response to the housing needs of the elderly (some 80% of Section 202 units are elderly-occupied), it is by no means the most significant. By the end of 1980, the elderly occupied close to 900,000 units of HUD-financed new housing construction. Of these units, only 40,000, or 5%, were produced under the Section 202 program. Looked at another way, Section 202 units represent only 3.5% of elderly-occupied units subsidized by HUD. Under the Public Housing and Section 8 Programs, by contrast, some 625,000 units of newly constructed and substantially rehabilitated housing were elderly-occupied. These programs thus account for close to 70% of all HUD-subsidized units occupied by the elderly.

These are the housing production programs which have been slated for rapid elimination by the Administration -- a proposal which we believe is unwise, for the following reasons:

- The number of older Americans is expected to grow sharply in the years ahead;
- The proportion of elderly renters to homeowners is likely to remain constant or perhaps increase. (presently, 4 million of the 15 million elderly households are renters);
- A high rate of poverty among those elderly renters is likely to persist (27% were below the poverty line in 1976);
- Despite Administration statements to the contrary, there is strong evidence that a rental housing shortage exists.[3] If federally assisted housing production programs are eliminated, this crisis will intensify. Availabilility of affordable rental units is likely to become an ever more serious problem for the elderly.

Unsubsidized private rental housing construction has "dried up", according to housing experts. Financing subsidies alone have never generated adequate, affordable housing for very low-income people. Thus, we believe it is imperative that the federal government continue to play a strong role in assisting housing construction for low-income people -- both through financing subsidies and through capital subsidy programs like Public Housing and Section 8.

Operating Subsidies

The Administration's FY 83 budget calls for a little over $1 billion in outlays for public housing operating subsidies. Operating subsidies cover the gap between income from tenant rents and the cost of operating projects. The subsidies are based, however, on a formula (Performance Funding System or PFS) which has been criticized as inadequate, confusing, and lacking incentives or rewards for efficiency. The $1.075 billion requested represents only about two-thirds of what would be required for full PFS funding, and is $27 million less than what was spent in FY 1981. We believe that full funding of public housing operating subsidies -- at least at the FY 82 level (1.3 million) -- is essential. Full funding will help arrest deterioration of public housing stock and, can help to create a safer and less crime-prone environment for elderly tenants.

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[3] Source: Uriel Manheim, National Association of Homebuilders

Vouchers

The Administration has proposed a major alteration in the type of rental housing assistance available, from the current Section 8 Existing program to a "Modified Section 8" or "voucher" plan. While this approach merits further study, it appears that the form in which vouchers have been offered would have a very adverse impact on elderly housing assistance recipients.

First, the conversion to vouchers is made in the context of a housing budget which ends most new construction and focuses nearly all housing aid resources on existing housing. As suggested above, a variety of demographic and economic factors make this a short-sighted strategy for responding to the housing needs of low income people, including the elderly. Moreover, there will be no stimulus for production of low income rental housing, nor will any incentive exist for improvement of housing that is subsidized. We believe a more balanced approach should be pursued.

Second, despite the proposed shift in resources, it is not clear that substantially more households will be helped. This is because funds recaptured from previous appropriations for the Section 8, Public Housing and Rent

Supplement Programs will replace rather than be added to funds previously committed to the Section 8 Existing program -- now to be the Modified Section 8 Program. Hence the "pot" of rental assistance monies will not really grow.

Third, the technical modifications and benefit changes which are to transform current rental assistance into modified Section 8 will result in abrupt and severe rent increases for elderly tenants of assisted housing units, and gradual elimination of eligibility for many of these households. An Urban Institute study indicates that the Administration's proposals, in combination with changes enacted in housing assistance programs last year, will result in a 44% cut in benefits for the typical elderly renter living alone (from her 1981 benefit level) and a 51% cut for elderly couples. Of particular concern are proposals to count food stamps as income, a provision which would most hurt those with the lowest income (one-third of those affected would be elderly households), and to recalculate the Fair Market Rent, reducing it by 15-20%. This new "payment standard" would immediately and substantially increase a tenant's rent.

Moreover, the standard would be frozen at the new level for a period of five years -- regardless of increases in utilities or other housing costs. Annual rent increases would have to be paid by tenants.

In short, the Associations are convinced that conversion to a housing voucher system would be premature and potentially devastating for elderly tenants of assisted rental housing. We believe that present Section 8 Rent Assistance Program should be maintained at no less than FY 1982 funding levels until the voucher approach or some other housing plan is fully tested and demonstrated to be superior and workable. At a very minimum, any new system -- such as a voucher -- should be gradually phased in rather than replacing an existing system in its entirety.

STATEMENT OF THOMAS W. WHITE, EXECUTIVE VICE PRESIDENT, COUNCIL OF STATE HOUSING AGENCIES

Senator D'AMATO. Thomas W. White, executive vice president, Council of State Housing Agencies.

Mr. WHITE. Thank you, Senator.

I have a cold, so I will be mercifully brief.

If I could have my written comments printed in the record.

Senator D'AMATO. Certainly your remarks will be entered into the record in their entirety.

PREVIOUS SPEAKERS SUPPORTED

Mr. WHITE. What I would like to do is support two of the previous speakers in what they have pointed out. First, Ms. Dolbeare, when she talked of the need to preserve existing housing stock, I think makes an excellent point. In particular, she also mentioned the need for State housing agencies to continue to be eligible for the flexible subsidy program.

I know that is very important to the State developments in New York.

The second thing I would like to mention is the need for a production program, and we support Mr. Edson's comments in thanking you for your work along with Senator Dodd, who you might wrap around the administration's program, to come out with something we think is much better.

Third, again the urgent supplement contains within it the necessary ingredients to finance some 70,000 to 100,000 units of housing in the pipeline and we have been working overtime to accomplish that purpose and we thank you and the committee members for your help thus far and we wish you a speedy converence with the House to resolve those issues.

Senator D'AMATO. Thank you very much, Mr. White.

Again I would like to thank you and the association for your help and support of what we think was a reasonable approach to a difficult task. Hopefully, some of the innovations that are contained in the legislation, the coinsurance provisions, the raising of the limits for FHA rehabilitation on apartment units from $3,000 to $20,000, will provide an impetus to do much more with limited resources.

Mr. WHITE. Thank you, sir.

[The statement follows:]

STATEMENT OF THOMAS W. WHITE, EXECUTIVE VICE PRESIDENT, COUNCIL OF STATE HOUSING AGENCIES

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, THANK YOU VERY MUCH FOR THE OPPORTUNITY TO TESTIFY TODAY. MY NAME IS THOMAS W. WHITE AND I AM EXECUTIVE VICE PRESIDENT OF THE COUNCIL OF STATE HOUSING AGENCIES. THE COUNCIL OF STATE HOUSING AGENCIES REPRESENTS THE 52 STATE-AUTHORIZED HOUSING FINANCE AGENCIES IN 46 STATES, THE CITY OF NEW YORK, WASHINGTON, D.C. AND THE COMMONWEALTH OF PUERTO RICO. ALSO INCLUDED IN OUR MEMBERSHIP ARE PARTICIPANTS IN THE STATE HOUSING FINANCE INDUSTRY INCLUDING INVESTMENT BANKERS, BUILDERS, DEVELOPERS AND NON-PROFIT ORGANIZATIONS.

RENTAL HOUSING CRISIS

INCREASES IN CONSTRUCTION COSTS COMBINED WITH RECORD HIGH INTEREST RATES HAVE MADE MOST CONVENTIONALLY FINANCED RENTAL HOUSING DEVELOPMENTS INFEASIBLE. TOTAL UNSUBSIDIZED APARTMENT CONSTRUCTION IN 1981 WAS ABOUT 100,000 UNITS. OF THOSE UNITS ONLY ABOUT 6,000 WERE AFFORDABLE FOR MEDIAN INCOME HOUSEHOLDS RENTING FOR $250 PER MONTH OR LESS. AGAINST THIS PAUCITY OF NEW RENTAL CONSTRUCTION, THE NATION LOST NEARLY A HALF MILLION UNITS TO ABANDONMENT, DEMOLITION AND CONDOMINIUM CONVERSION LAST YEAR. BECAUSE THE MEDIAN INCOME OF RENTING HOUSEHOLDS IS SO LOW, HOMEOWNERSHIP IS NOT AN ALTERNATIVE FOR MOST OF THESE FAMILIES. WITHOUT A MAJOR FEDERAL COMMITMENT TO STIMULATE HOUSING PRODUCTION FOR AMERICA'S MODERATE AND LOW INCOME HOUSEHOLDS, TENS OF MILLIONS OF THESE HOUSEHOLDS WILL FACE A GROWING AFFORDABILITY AND AVAILABILITY GAP FOR MODEST BUT DECENT SHELTER.

TODAY, RENTAL SHORTAGES AND INTEREST RATES THAT MAKE HOMEOWNERSHIP UNATTAINABLE FOR MOST YOUNG FAMILIES ARE FORCING MIDDLE INCOME HOUSEHOLDS TO COMPETE DIRECTLY WITH LOWER INCOME RENTERS FOR APARTMENT UNITS. THE RESULT IS THAT THE VACANCY RATES FOR UNITS AFFORDABLE TO MODERATE AND LOW INCOME HOUSEHOLDS ARE SIGNIFICANTLY BELOW THE NATIONAL VACANCY RATE FOR ALL RENTAL UNITS.

ALTHOUGH PUBLIC HOUSING AND SECTION 8 PROJECTS PROVIDE DECENT AND AFFORDABLE HOUSING FOR MILLIONSOF LOW INCOME HOUSEHOLDS, WAITING LISTS FOR THESE UNITS ARE LONG. FOR EXAMPLE, 40,000 BALTIMORE FAMILIES ARE WAITING FOR A VACANCY IN ONE OF THE CITY'S 18,000 PUBLIC HOUSING UNITS. NEW APPLICANTS FOR DADE COUNTY, FLORIDA LOW INCOME UNITS FACE A 20-YEAR WAIT.

BESIDES THE NEED FOR AFFORDABLE SHELTER -- A NEED WHICH DEMOGRAPHERS AND HOUSING EXPERTS SEE AS GROWING STEADILY FOR THE NEXT TWENTY YEARS -- THE NATION'S RESIDENTIAL CONSTRUCTION INDUSTRY IS DYING. ALTHOUGH THE INDUSTRY WILL COME BACK ONCE INTEREST RATES DO COME DOWN, PRICE INFLATION FOR NEW OWNERSHIP AND RENTAL HOUSING WILL JUMP AS DEMAND FOR UNITS WILL FAR EXCEED THE PRODUCTION CAPABILITY OF THE CRIPPLED INDUSTRY. THE SEVERE HOUSING PRICE INFLATION THAT ACCOMPANIED THE RECOVERY FROM THE MID-SEVENTIES RECESSION MAY BE MINOR COMPARED TO WHAT WE WILL SEE IN THE MID-EIGHTIES.

FUNDING A NEW PRODUCTION PROGRAM

CLEARLY THERE IS A NEED FOR NEW HOUSING PRODUCTION. THE COUNCIL HAS BEEN EXTREMELY FRUSTRATED WITH THIS ADMINISTRATION'S APPROACH TO NEW PRODUCTION AND FINANCING THE SECTION 8 PIPELINE.

OVER THE PAST TWO YEARS, CSHA HAS RECOGNIZED THAT THE SECTION 8 PROGRAM WOULD BE PHASED OUT. WE UNDERSTAND AND RELUCTANTLY SUPPORT THE TERMINATION OF THE SECTION 8 NEW CONSTRUCTION PROGRAM. WE DO SO RELUCTANTLY BECAUSE WE BELIEVE THE PROGRAM HAS BEEN AS SUCCESSFUL AS CONGRESS INTENDED IN PROVIDING WELL-MANAGED HOUSING FOR LOW INCOME PEOPLE. HOWEVER, WE RECOGNIZE THAT USING A DEEP SUBSIDY PROGRAM FOR PRODUCTION IS TOO COSTLY, ESPECIALLY IN TIGHT BUDGET TIMES. WE RECOGNIZE THE WISDOM OF THE CONGRESS AND THE ADMINISTRATION IN PHASING OUT THE PROGRAM AT THIS TIME. THERE IS, HOWEVER, A CONTINUED NEED FOR PROGRAMS WHICH ENABLE PRIVATE INDUSTRY TO SUPPLEMENT THE HOUSING STOCK FOR THE LOW AND MODERATE INCOME AMERICANS. THE ECONOMICS OF RENTAL HOUSING AT THIS TIME DO NOT ALLOW FOR PURELY PRIVATE FINANCING OF RENTAL HOUSING.

IN RECOGNITION OF THE NEED FOR MULTIFAMILY PRODUCTION THE SENATE AUTHORIZING COMMITTEE INCORPORATED ELEMENTS OF SENATOR DODD'S NEW CONSTRUCTION PROGRAM WITH THE ADMINISTRATION'S RENTAL REHAB PROPOSAL. WE WERE PLEASED WITH THE GIVE AND TAKE ON BOTH SIDES OF THE COMMITTEE TO REACH A COMPROMISE CONSISTENT WITH THE SPIRIT OF NEW FEDERALISM AS THEY DEVELOPED A PROGRAM WHICH RELIES ON STATE AND LOCAL ADMINISTRATION. THE SUCCESS OF STATE HOUSING FINANCE AGENCIES AND LOCAL COMMUNITY DEVELOPMENT EFFORTS ALL POINT TO THE FACT THAT NON-FEDERAL PROGRAM ADMINISTRATION IS EFFECTIVE. WE FEEL THE COMMITTEE MADE SIGNIFICANT STEPS TOWARD ACHEIVING A WORKABLE PRODUCTION PROGRAM. WE SUPPORT THE FLEXIBILITY THEY PROVIDED AS A DEFINITE IMPROVEMENT OVER PAST FEDERAL PRODUCTION PROGRAMS. IN THESE DAYS OF TIGHT BUDGETS, MAXIMUM

OPPORTUNITY TO LEVERAGE FUNDS IS CRITICAL AS IS THE USE OF TAX-EXEMPT FINANCING WHICH WE UNDERSTAND IS ANTICIPATED.

WE HAVE, HOWEVER, SERIOUS PROBLEMS WITH THE LACK OF RESOURCES PROVIDED FOR THE PROGRAM. THE COMMITTEE AUTHORIZED $300 MILLION FOR THEIR RENTAL REHAB AND CONSTRUCTION GRANT PROGRAM. ALTHOUGH WE FEEL THIS IS INADEQUATE WE ARE HOPEFUL THAT THE HOUSE AND SENATE WILL WORK OUT AN ARRANGEMENT CLOSER TO THE HOUSE FUNDING LEVEL OF $1.3 BILLION. WE FEEL $1.3 BILLION IS, IN ITSELF, A VERY MODEST LEVEL OF FUNDING FOR A NEW CONSTRUCTION PROGRAM AND HOPE THIS COMMITTEE WILL PROVIDE AT LEAST THAT LEVEL.

SINCE STATE HOUSING FINANCE AGENCIES WERE RESPONSIBLE FOR INITIAL PROGRAM FEASIBILITY UNDER BOTH THE SECTION 8 AND SECTION 236 PROGRAMS, INCORPORATING A MAJOR ROLE FOR STATE AGENCIES IN ANY NEW RENTAL PRODUCTION PROGRAM IS APPROPRIATE AND SHOULD ENSURE PROMPT AND SUCCESSFUL PROGRAM IMPLEMENTATION. THE PROVEN STATE CAPACITY IN SUCCESSFULLY UNDERWRITING PROJECTS IS DEMONSTRATED BY LOW DEFAULT RATES. THEIR SUCCESSFUL OPERATION WILL GREATLY BENEFIT THE PROGRAM. FURTHER, WITH HUD'S STAFF ATTRITION AND LIMITED BUDGET, IT WILL BE DIFFICULT TO ADMINISTER A PROGRAM WITHOUT THE ADDITIONAL CAPACITY WHICH STATE AGENCIES CAN PROVIDE. FOR THESE REASONS WE RECOMMEND THAT THIS COMMITTEE PROVIDE A REASONABLE SETASIDE OF FUNDS TO STATE AGENCIES IN ORDER THAT THEY MAY EFFECTIVELY ADMINISTER A NEW PRODUCTION PROGRAM.

URGENT SUPPLEMENTAL

THE COUNCIL COMMENDS THIS SUBCOMMITTEE FOR ITS WORK THUS FAR ON THE URGENT SUPPLEMENTAL. WE ARE GREATLY APPRECIATIVE OF ITS COMMITMENT TO PROVIDE THE FUNDS TO FINANCE OUT THE SECTION 8 PIPELINE. WE ARE HOPEFUL THAT, AS YOU CONTINUE TO WORK THIS ISSUE OUT WITH THE HOUSE, THE FA DEADLINE WILL BE EXTENDED TO THE END OF THE FISCAL YEAR AS PROPOSED BY YOUR COMMITTEE. FURTHER, WE SUPPORT A 14% CAP SO LONG AS THE OWNER/ISSUER CONTRIBUTION IS SET AT A MAXIMUM OF 6 POINTS BASED ON THE SYSTEM OF THE CURRENT OPERATIVE FA.

WE FURTHER SUGGEST THAT HUD BE DIRECTED TO FAIR SHARE THE FA ALLOCATION BASED ON UNITS IN THE PIPELINE.

ALONG THESE LINES, WE ALSO APPRECIATE THIS COMMITTEE'S DIRECTION TO HUD TO ELIMINATE THE 7-3/4% CAP ON COST AMENDMENTS. INDEED, COST AMENDMENTS SHOULD BE LIMITED BY ACTUAL COSTS AND NOT BY SOME ARBITRARY LIMITATION.

IN RECOGNITION OF THE MANY ISSUES THAT THE SUBCOMMITTEE MUST DEAL WITH TODAY, I HAVE KEPT MY REMARKS VERY BRIEF. I WOULD BE HAPPY TO PROVIDE THE SUBCOMMITTEE WITH MORE DETAILED INFORMATION AT THIS REQUEST. I WOULD BE PLEASED TO ANSWER ANY QUESTIONS THAT YOU MAY HAVE.

Senator D'AMATO. Robert J. Rigby, Jr., executive director, Housing Authority of the city of Jersey City.

We are getting a little bit ahead.

Is Mr. Rigby here?

If he is not, is John Bush here?

STATEMENT OF JOHN S. BUSH, JR., VICE PRESIDENT, GOVERNMENT AFFAIRS, UNITED STATES GYPSUM CO.

ACCOMPANIED BY WILLIAM D. KELLEHER, DIRECTOR FOR COMMUNITY DEVELOPMENT

Mr. BUSH. Senater, I am John Bush. With me is William Kelleher.

We are proud and pleased to have three major manufacturing plants in the great State of New York.

Part of the message I am going to bring you, we used to employ about 1,200 and we only have about 750 working right now.

Senator D'AMATO. Where are those plants located?

Mr. BUSH. One is up at Oakfield, up in the northwest corner, around Batavia, and another just below West Point, and then another up around Rochester.

Senator D'AMATO. A good diversity.

Mr. BUSH. We are here on behalf of the Chamber of Commerce of the United States.

As you know, the Chamber of Commerce of the United States is the largest federation of business and professional organizations in the world. And as the principal spokesman for the overall business community here in the United States, we welcome this opportunity to express our views on the 1983 appropriations for HUD.

FURTHER REDUCTIONS IN SPENDING URGED

The best thing Congress can do for housing is reduce the Federal deficit by further reductions in spending so that more resources will be left with the private sector to produce the economic growth needed by all.

A strong expanding economy is the key to solving our housing and urban problems.

Since the heady days of the Great Society, there have been considerable changes in our economy that necessitate a complete and thorough evaluation of Government spending programs. The issues confronting the American economy at present are radically different from those of the mid-sixties when much of the expansion of the private sector was undertaken.

During the sixties, a high real growth and comparative price stability made expansion of transfer payments and Government service programs appear relatively costless.

Currently, however, stagnant real growth and continued price volatility make the economic cost of additional Government spending prohibitive. Instead, a period of retrenchment and consolidation is called for at this time.

This does not presuppose a dismantling of the welfare state so much as a systematic review of fiscal priorities designed to eliminate ineffective programs without sacrificing essential service for the truly needy.

As you know well, Senator D'Amato, housing presently is in the worst slump it has been in since WW II.

The current housing recession is approximately 40 months old, which is about twice as long as anything else we have experienced in this period.

We are producing fewer than 1 million housing units a year at a time when the demographers tell us we must have about 2 million units a year.

Last year was the worst since 1946 and 1982 is on the road to being even worse.

As I say, my company, for one, has more than 3,000 workers laid off.

The National Association of Home Builders estimates that only 15 percent of American families presently have incomes sufficient to qualify for the purchase of a medium-priced new single-family home. This presents two problems. The first is that as prices escalate even faster and more potential buyers are pushed from the new home market, they create more competition than for the used house market and that pushes those prices up even more.

The second impact of the trend is the pressure that it puts on Congress to expand direct Federal housing subsidies.

There are approximately 26 million units in the country of which roughly 2 million are public housing. The average income of household renting apartments in this country is about $8,800 per year, just about half of what the income is for homes owned by homeowners. The answer to this problem is not increasing subsidies to augment the income of renters, but rather to rebuild our economy to allow for economic growth, a real increase in wages, and the purchasing power of Americans.

As you know, with mortgage money, this is the life blood of the housing industry, and the availability has become much lower than it used to be, much, much higher prices.

The current slump was caused by a major increase in the cost of mortgages, about 3 years ago, and despite the fact we are in a slump, those prices have continued generally to go up.

Currently there is some debate over the role of Federal credit guarantees in housing. We think ultimately the marketplace is the best and fairest allocator of credit. However, the U.S. Chamber of Commerce continues to support the unsubsidized mortgage insurance program of FHA and the various self-funding secondary funding activities of the Ginnie Mae and Fannie Mae.

Recently there has been a serious debate about the shares of capital funds allocated to housing in our overall economy. While it is clear we are spending large amounts of money for residential mortgages, its share of overall market remains relatively constant.

ROLE OF GOVERNMENT BORROWING

The role of the Government borrowing in the economy is growing more rapidly than any other source in recent history. It is excessive Federal borrowing that is the root cause of monetary instability in this country.

According to the Federal Reserve Board, housing's share of the credit markets has declined from 31 percent in the 1950's and about 25 percent in the 1960's and 1970's to only 16.4 percent in 1980 and 1981. In other words, it is half now what it used to be back in the fifties. By comparison, the Federal Government share of the overall credit market has gone from about 6.7 percent in the fifties to almost 33 percent last year.

And that is where, in our opinion, the problem lies.

So far as the specific proposals before you, for the HUD appropriation this year, the U.S. chamber supports the budget reductions proposed by the administration. Given the long-term uncertainty in the rental market and the section 8 program, there is clearly a need for a change.

The program proposed by the administration offers continued support for low-income renters while a more efficient and effective method for supporting low-income housing can be found.

The chamber also supports the elimination of the 312. rehab loan programs.

The provision of loans for housing rehab should be handled by the private sector, or through the community development block grant program.

In conclusion, today the greatest danger facing America and America's ability to house our citizens is inflation. And in the recent past Federal policy has looked to short-term bailouts that reduce the direct impact of inflation without doing anything to lessen its causes.

We can no longer afford to do this. We must commit ourselves to a steady course of restoring the balance between the public and private sectors and reducing inflation.

This means cutting Federal spending, borrowing, tax and regulating. Many will claim this course is not politically realistic. The U.S. chamber thinks now is the time for economic realism and less politics.

A continuation of unchecked high levels of inflation is far more destructive and dangerous to our society than cutting Federal spending.

Thank you very much.

Senator D'AMATO. Thank you very much.

[The statement follows:]

STATEMENT OF JOHN S. BUSH, JR., ON BEHALF OF THE CHAMBER OF COMMERCE OF THE UNITED STATES

I am John S. Bush, Jr., Vice President, Governmental Affairs for the United States Gypsum Company. My appearance today is on behalf of the Chamber of Commerce of the United States where I serve as a member of the Construction Action Council. I would also like to introduce William D. Kelleher, the Chamber's Director for Community Development. The U. S. Chamber welcomes this opportunity to express its views on the fiscal 1983 Appropriations for the U. S. Department of Housing and Urban Development (HUD).

The Chamber of Commerce of the United States if the largest federation of business and professional organizations in the world, and is the principal spokesman for the American business community. The Chamber represents more than 240,000 members, of which more than 235,000 are business firms, more than 2,800 are state and local chambers of commerce, and more than 1,300 are trade and professional associations.

More the 85 percent of the Chamber's members are small business firms having fewer than 100 employees, yet virtually all of the nation's largest industrial and business concerns are also active members. We are particularly cognizant of the problems of smaller businesses, as well as issues facing the business community at-large.

Besides representing a cross-section of the American business community in terms of number of employees, the Chamber also represents a wide management spectrum by type of business and location. Major classifications of American business-manufacturing, retailing, services, construction, wholesaling, and finance--all have more than 15,000 businesses represented as members of the Chamber. Yet no one group represents as much as 23 percent of the total Chamber membership.

For many years, federal policy assisted Americans in obtaining safe, sanitary and decent housing by facilitating the actions of the private market. Now, excessive federal spending, taxing, regulating and borrowing is robbing our economy of the strength to meet our housing needs. With the passage of the omnibus Budget Reconciliation Act of 1981 and the Economic Recovery Tax Act of 1981, Congress has begun the long overdue process of cutting back on the share of our resources taken by the federal government. This effort must continue. The best thing Congress can do for housing is to reduce the federal deficit by further reductions in spending so that more resources will be left with the private sector to produce the economic growth needed by all.

A strong expanding economy is the key to solving our housing and urban problems. We support budget reductions not because we are mean-spirited or less compassionate, but because we must reduce the excessive claim the federal government has put on our scarce resources, resources needed for private investment to produce more goods and services and stimulate the creation of more jobs. Tax reductions are needed, not to redistribute income but as an incentive for creating more income.

For the past twenty years, this country has tended to view federal spending as a costless way of solving perceived problems or meeting newly devised national objectives. Unfortunately, however, the government has failed to consider what effect this shift in resources would have on the private sector's ability to compete in a more competitive world. Government also failed to realize how expensive these programs would become as benefits were expanded to a greater number of recipients.

Since the heady days of the Great Society, there have been considerable changes in our economy that necessitate a complete and thorough evaluation of government spending programs. The issues confronting the American economy at present are radically different from those of the mid-Sixties, when much of the expansion of the public sector was undertaken. During the 1960's, a high real growth and comparative price stability made expansion of transfer payments and government service programs appear relatively costless.

Currently, however, stagnant real growth and continued price volatility make the economic costs of additional government spending prohibitive. Instead, a period of retrenchment and consolidation is called for. This does not presuppose a dismantling of the welfare state so much as a systematic review of fiscal priorities designed to eliminate ineffective programs without sacrificing essential services for the truly needy.

CURRENT HOUSING SITUATION AND THE LONG TERM OUTLOOK FOR HOUSING

Housing is in the worst slump of the post-World War II period. The current housing recession is approximately 40 months old and we are now estimated to be producing less than 1 million housing units a year, this at a time when potential demand for housing approaches 2 million units a year. Last year was the worst housing production year since 1946, and 1982 went below that mark. Actual new home sales in January nationwide equaled roughly the total sales in the western region alone during the 1978-1979 period.

Clearly, the current low level of housing production has been a disaster for both industry and consumers, and could lead to a period of housing price inflation as builders and natural suppliers struggle to recoup these current losses when conditions improve. Also, increased consumer demand may tend to push up prices as large numbers of new families enter the housing market in the 1980's.

However, if the Congress supports President Reagan's efforts to return the nation to economic health, the long term outlook for the housing industry is good. Housing demand is currently at record levels. It is expected to swell even more dramatically in the 1980's. This is due to basic demographic trends now impacting the U. S. population. Declining household size will mean that a larger number of housing units than in the past will be needed to provide shelter for our population. Average household size was recorded at 3.33 in 1960. It declined to 3.14 in 1970. In 1979, the U. S. Census Bureau estimates household size at approximately 2.77. The Bureau has projected that by 1990, household size may decline to as low as 2.41. Lower birth rates, more single-person households, changes in life-style resulting in delayed marriages and higher divorce rates all are reasons for this decline.

Shifting patterns in the age structure of the population will also be a major force shaping housing needs. The maturing of the "baby boom" generation into home buyers has already started to have a dramatic impact on the housing market. Households headed by individuals 25 to 34 years of age accounted for approximately half the single-family houses sold in 1977. In 1978, approximately 17 million households fell into this age group. This group is expected to grow by 6 million during the 1980's to 23 million households.

But household formation rates are projected to fall off rapidly by the late 1980's and early 1990's, and by the year 2000 the rate may approach the 800 thousand per year level which is lower than the 1960's rate and approximately 50 percent of recent experience.

Flexibility must be the hallmark of our basic housing policy to match the shifting demographic picture. We must take steps that preserve our existing housing stock through conservation and rehabilitation. Also we must develop a system that can allow individuals to finance their own housing needs. The demand for homeownership will be extremely strong during the 1980's and 1990's as record levels of young adults enter the housing market. Under current conditions this will translate into massive desires for homeownership while demand for rental units will fall off sharply. If we preserve our existing rental stock, the new production need for rental units will be almost nonexistent.

Rigid government programs are not the answer. Government must work to facilitate individual choice rather than subsidize individual actions.

Housing Affordability

The current crisis in housing is a crisis in affordability that has been with us throughout the 1970's and has been dramatically highlighted by the current high mortgage interest rates. Since 1972, the average sale price of a single-family home has almost doubled. The average new home now costs over $60,000. The family income required to qualify for the median-priced home was about $13,000 in 1973. Now, it's about $25,000.

An increasing number of families is being priced out of the market by housing costs that are increasing faster than their incomes. The families most affected by this trend are young ones, with incomes between $16,000 and $25,000. Demand for housing remained strong through much of 1979 because many families believed that inflation would push the price of housing even further out of their reach. However, when average interest rates for home mortgages range between 13 and 15 percent and the average monthly payment for principal and interest on a median home soars to over $650, effective housing demand is severely damaged if not destroyed. This escalation in housing prices and mortgage interest rates is especially hard on first-time homebuyers. Between 1977 and 1979, homebuyers classified as first-time buyers declined from 26 percent to 18 percent.

The shrinkage in effective housing demand is part of a long term trend that has resulted in an ever decreasing portion of American families being able to purchase a new home. Bernard Frieden and Arthur Solomon of the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University conducted a 1977 study of the nation's housing needs. They concluded that 46 percent of America's families could afford to purchase a new median-priced home in 1970. They estimated that six years later, only 27 percent could afford a new median-priced home. NAHB (National Association of Home Builders) currently estimates the home buying capability of the American public has been reduced even further. NAHB estimates that only 15 percent of American families presently have incomes sufficient to qualify them for the purchase of a median-priced, new single-family home.

There is a two-fold implication for the HUD budget from this trend. First, as housing prices continue to escalate faster than income, more and more potential homebuyers will be pushed from the new home market into other parts of the housing market. Because fewer new homes will be built, competition for existing housing will increase, driving up its price.

In many cases, rent control has limited the ability of multi-family housing to fill the gap created by reduced production of single-family housing. This overall increase in the cost of existing housing will reduce the amount of shelter HUD can expect to provide from its current subsidy program.

The impact of increased competition is already having a major adverse effect on low-income families. Hardship from excessive housing costs now equals poor housing quality as a problem for low-income families.

The second impact of this trend is the pressure that will be put on Congress and the Administration to expand direct Federal housing subsidies. Originally, the direct subsidy programs were aimed at low-income families, and gradually we have seen them expanded to those with moderate incomes. Now, inflation is creating pressure for the provision of direct subsidies to middle-income families to help them pay for housing. More subsidies are not the answer to this problem. Stopping inflation and increasing families' purchasing-power is the only real solution to this part of the housing crisis.

There are approximately 26 million rental units in the country of which roughly 2 million are public housing. The average income of a household renting an apartment in this country is $8,800 per year or about one-half of the average income for homeowners. One of the major long-term problems facing the rental housing industry is the lack of effective demand because of the low incomes of many potential renters. The answer to this problem is not increasing subsidies to augment the income of renters, but rather a rebuilding of our economy to allow for economic growth and an increase in the real wages of all Americans to allow them to purchase the goods and services they desire. The key to economic growth is investment by the private sector to increase productivity.

Declining productivity and the lack of real economic growth are two major threats to the health and stability of all segments of the housing market. Currently, this is especially true for rental housing because inflation in operating costs and high interest rates are destroying the ability of both renters and landlords to finance this type of shelter.

Over time, the capacity of renters to pay higher rents must be developed, and inflation must be controlled so that the costs of building and maintaining rental units do not increase faster than tenants' incomes.

Another major factor discouraging the production of rental housing is rent control. Nearly 60 percent of all rental housing is in buildings with four units or less, which are typically owned by small entrepreneurs. Because of the small number of units involved in each instance, it is in the interest of the landlord to minimize vacancies and retain a stable group of renters. These factors, more than any rent control ordinance, work to minimize rent increases by this type of owner. Rent control forces this type of small scale provider of shelter out of the market because they cannot obtain rents that allow them to either maintain their buildings properly or offer them as attractive investment to new owners.

Government at all levels should work to provide incentives for the provision of rental housing and eliminate disincentives such as rent control which ultimately leads to destruction of rental housing.

Mortgage Money

The cost and availability of mortgage financing traditionally has had a major impact on the housing industry and homebuyers. The current housing slump was caused by a major escalation in mortgage interest rates. However, these rates have increased steadily for the past several years.

Prior to the present housing slump, various devices have been used to keep funds available to the housing market. Recently we have seen the use of money market certificates to help thrift institutions retain savings funds and the introduction of alternate mortgage instruments ranging from graduated payment mortgages to the new rollover mortgages. All these devices can help to smooth the curves in the housing cycle, but they are not and cannot be a replacement for stability in interest rates at a non-inflated level.

A recent new source for home mortgage money has been the secondary mortgage market based on mortgage-backed securities. This investment-oriented source of funds cannot operate efficiently because until recently there has been reduced investor interest in the long-term, fixed-rate market. The rise in long-term rates reflects the uncertainties generated by uncontrolled inflation resulting from excessive government spending. The key to obtaining a stable source of mortgage money through both the primary and secondary mortgage markets is to control inflation by eliminating government deficit spending so that there will be sufficient capital available for investment and a willingness on the part of investors to invest in long-term securities. A healthy secondary mortgage market is vital to the housing industry.

Fluctuations in the availability and cost of mortgage money have subjected housing construction to sharp, cyclical changes. During the 1970's, the number of housing starts ranged from a high of 2.38 million in 1972 to a low of 1.17 million in 1975. Housing prices at the peaks of the cycle must be increased to cover the cost of plant and equipment that stands idle during slack periods. During downturns in construction activity, the capacity for manufacturing materials and components used in housing construction is underutilized and many skilled managers and workers are forced out of the industry. When construction activity increases, workers demand higher wages to compensate them for periods of unemployment. And the return on plant and equipment used in manufacturing building materials must be adjusted to make up for losses during idle periods. The price of land and interest rates is also distorted by these fluctuations in the construction cycle.

Currently there is some debate over the role of federal credit guarantees in housing. Ultimately, the marketplace is the best and fairest allocator of credit. However, the U. S. Chamber continues to support the unsubsidized mortgage insurance program of the Federal Housing Administration (FHA) and the various self-funding secondary mortgage market activities carried on by the Government National Mortgage Association (Ginnie Mae) and the Federal National Mortgage Association (Fannie Mae). At its February 18, 1982 meeting, the Chamber Board voted to continue this policy. Attacking the problem of government guarantees and tax exempt borrowing on a piece-meal basis will only increase the credit distortions caused by these types of programs.

Recently, there has been serious debate about the share of capital funds allocated to housing. While it is clear that we are spending large amounts of money for residential mortgages, its share of the overall market remains relatively constant. The role of federal borrowing in the economy has grown more rapidly than any other source in recent history. It is excessive federal borrowing that is the root cause of monetary instability in the country.

According to the Federal Reserve Board, housing's share of the credit markets has declined from 31 percent in the 1950's and about 25 percent in the 1960's and 1970's to only 16.4 percent in 1980-81. By comparison, the federal government's share has increased from 7.7 percent in the 1950's to almost one-third last year.

Reducing the Cost of Housing

While higher mortgage interest rates are an obvious contribution to the rising costs of housing, there are other significant factors that have caused housing prices to rise.

Federal, state and local regulations have also increased the cost of housing. Housing experts such as George Sternlieb of Rutgers University, think that 20 percent of the current cost of housing can be traced to excess or antiquated government regulation.

Outdated building codes hinder the development and introduction of new cost-saving materials and techniques. The larger number of code-issuing jurisdictions--each with the authority to pass its own unique code requirements--retards the standardization of building products which would also help reduce costs. Even communities that adopt one of the major "model" codes often amend them, making revisions and deletions that are restrictive in nature.

The lack of coordination between various housing codes and code officials frequently causes delays and confusion. One builder in the Midwest noted that no less than six different inspectors had to approve a house before it could be occupied.

Local land use and development restrictions also add to the cost of housing by causing delays in the building process and needlessly restricting the supply of land available for housing. Restrictive zoning and subdivision regulation--such as large-lot zoning, moratoriums on water and sewer line hookups and slow growth and anti-growth development policies--are increasing housing costs in many communities. Moreover, such restrictions have the effect of not allowing homes to be built that can meet the needs and financial capabilities of young families.

The Urban Land Institute in a recent survey of 12 metropolitan areas found that improved lot prices increased an average of 109 percent and raw land increased at an average of 97 percent between 1975 and 1980. In certain parts of the country such as San Diego, the average single-family improved lot price is now approximately equal to the median sales price of a new home in 1975.

American homes are bigger and more complex than ever before, accounting in part for the increase in the cost of housing. However, these homes are costing more than they need to. More efficient building and development regulation could help keep homeownership part of the American dream.

The President's Housing Commission has prepared a detailed list of regulatory reforms to reduce excessive regulation costs. The Chamber agrees with the basic construction deregulatory thrust of the Commission's report in areas such as permitting, land use practices and impact fees. We believe federal agencies should consider the costs of new regulations and their impact on our ability to afford housing before they are adopted.

GOVERNMENT'S ROLE IN ECONOMIC DEVELOPMENT

As David Birch of the MIT Program on Neighborhood and Regional Change has pointed out, government economic development strategies aimed at holding on to old firms and obsolete functions do not work. In fact, the rates of job loss and business failure seem to be similar in all parts of the country. It is the rate of new job creation that varies.

Traditionally, government programs have focused on holding on to jobs and working with a few large companies or developers. This mode of operation is easier for government because large firms are easily identified and the risks and rewards of direct assistance can be readily calculated. Politically, those supporting this type of program can point to immediate success when the program works.

Aid to emerging small businesses is much more difficult. First, small businesses fail frequently and agencies trusted with the care of public funds cannot easily justify the loss of the moneys conveyed to them. Second, for the most part, small business does not want or use direct aid. When polled at last year's White House Conference on Small Business, the overwhelming majority of participants asked that tax laws be reformed to permit small business to gain and retain capital more easily. In the top sixty recommendations of the conference, there was not one suggestion for direct economic assistance such as loan guarantees, interest subsidies or grants. The basic thrust of the recommendations was that the less government agencies become involved in these affairs, the more small business people would like it.

The mission of government is to create an attractive climate for business formation. The Chamber believes three major government actions are needed in this regard:

- Regulatory relief to cut the delays, costs and inefficiencies caused by government red tape at every level of government.
- Tax relief to allow more funds to remain in private hands.
- Rebuilding our basic infrastructure of roads, sewers, water supply systems, waste disposal facilities and bridges.

Regulatory and tax relief are needed in all aspects of our economy. The Reagan Economic Recovery Program has provided the basic direction in these areas, and we urge Congress to stick with the program it adopted last year. However, it is infrastructure repair and restoration that is most important for our cities and towns to be restored to economic health. Such repair and restoration is an activity where state and local government can play a key role.

As Pat Choate and Susan Walter point out in their study of the current decay in our public works system, America in Ruins:

> Public works play a crucial role in the creation of national wealth and productivity growth. Education, research and development and public works are the only real supply side investments the public sector makes in our economy.

Economic development is dependent upon a sound public infrastructure, yet, our cities and other declining communities have neglected this area to their economic detriment. Despite widespread evidence of decay, the nation's annual investment in public works has actually declined by over twenty percent from the 1965 level. In certain select functions, such as highway and street construction which could have a major impact on urban revitalization, investment has declined by 50 percent in 1972 dollars.

The Chamber recommends that the Community Development Block Grant and Urban Development Action Grant programs be focused on physical development projects and basic infrastructure repair. While the ultimate resonsibility for revitalizing individual communities rests at the state and local level, the federal government through these two programs can play an important role in fighting urban poverty by encouraging economic growth.

SPECIFIC HUD BUDGET REDUCTIONS

The U. S. Chamber supports the budget reductions proposed by the Administration. Given the long term uncertainties in the rental market and the excessive costs of the Section 8 program, there is clearly a need for a change. The program proposed by the Administration offers continued support for low income renters while a more efficient and effective method of supporting low-income housing can be found.

The Chamber also supports the elimination of the 312 Rehabilitation Loan Program. The provision of loans for housing rehabilitation should be handled by the private sector or through the Community Development Block Grant program (CDBG).

In addition, we support additional budget reductions in the areas of the research and development budgets for FY 1983, and we would recommend a reduction in the Urban Development Action Grant program in recognition of the increased used of CDBG funds for economic development.

SUMMARY AND CONCLUSION

In urging the adoption of the Constitution, Alexander Hamilton wrote in The Federalist Papers the following:

> A patient who finds his disorder daily growing worse, and finds that an efficacious remedy can no longer be delayed without extreme danger, after cooly reviewing his situation, and the characters of different physicians, selects and calls in such of them as he judges most capable of administering relief, and best entitled to his confidence.
>
> The prescription is not sooner made however, then a number of persons interpose, and without denying the reality or danger of the disorder, assure the patient that the prescription will be poison to his consitution, and forbid him, under pain of certain death, to make use of it. Might not the patient reasonably demand, before he ventured to follow this advice that the authors of it should at least agree among themselves on some other remedy to be substituted? And if he found them differing as much from one another as from his first councellors, would he not act prudently in trying the experiment unanimously recommended by the latter, rather than be hearkened to those who could neither deny the necessity of a speedy remedy, nor agree in proposing one?
>
> Such a patient and in such a situation is America at this moment.

Today, the greatest danger facing America and the housing industry is inflation. In the recent past, federal policy has looked to short-term bail-outs that reduce the direct impact on inflation without doing anything to lessen its causes. We can no longer afford to do this. We must commit ourselves to a steady course of restoring a balance between the public and the private sectors and reducing inflation. This means cutting federal spending, borrowing, taxing and regulating. Many will claim that this course is not politically realistic. The U. S. Chamber believes now is the time for more economic realism and less politics. A continuation of unchecked high levels of inflation is far more destructive and dangerous to our society than cutting federal spending.

STATEMENT OF ROBERT J. RIGBY, JR., EXECUTIVE DIRECTOR HOUSING AUTHORITY OF THE CITY OF JERSEY CITY

Senator D'AMATO. Is Mr. Rigby here yet?

Mr. Rigby, if you could summarize your statement, it will be included into the record as if read in its entirety.

Mr. RIGBY. Thank you.

Senator, my name is Robert Rigby, executive director of the Jersey City Housing Authority. I am here to testify today on behalf of the Council of Large Public Housing Authorities, primarily on the issue of public housing operating subsidies for fiscal year 1983.

Before I address that subject, I will be remiss if I did not, on behalf of the council, express our appreciation for the committee's support of the supplemental appropriation of $254 million which you have recently passed. It allows us basically to do our job and to serve the millions of low-income residents which the public housing program serves nationwide. We realize it was a particularly difficult time to take such an action and you affirm our trust in your public leadership by having done so. And we thank you.

On a less positive note, prior to addressing the 1983 numbers, it has come to our attention that Secretary Pierce and Deputy Assistant Secretary Abrams testified before this committee last week. Although we are working with a number of the HUD staff in recent meetings with Under Secretary Hovde and have produced some progress on a variety of issues, we cannot help but comment on some of the testimony presented by Assistant Secretary Abrams.

OPERATING SUBSIDY MONEYS NOT RECEIVED

He has claimed before this committee, as he has on past occasions, that the 1982 operating subsidy moneys and the 1981 supplemental moneys have been received by housing authorities. That, in fact, is not the case. The central office has sent out a variety of directives to the field offices and regional offices, however, first it is only to allocate 75 percent of the 1981 subsidy level and even then only a trickle has really reached the housing authorities coffers. In fact, the housing authorities remain in the fifth month of their fiscal year for January housing authorities and the third for April and we have not yet received 10 cents of operating subsidy from 1982.

Mr. Abrams also asserted that the Council of Large Public Housing Authorities agreed with the distribution of only 75 percentof the 1981 level. That is no way the case and it is inconceivable to us how that could be misinterpreted. Mr. Abrams indicated that 60 percent would be sent out. We said that would be totally untenable. He indicated then that 75 percent would be sent out, which we obviously said it is better than 60 but in no way agreed to less than the Congress itself has authorized for 1982.

I think the most relevant point of both of those problems with Mr. Abrams's testimony is that our council gives full support to the supplemental bill that indicates that HUD must allocate the entire fiscal year 1982 appropriations within 30 days and according to the current PFS formula. We think that stance is laudable and should be emphatically pursued to the 1983 numbers. Basieally, the Council of Large Public Housing Authorities estimate is coterminous with the calculation using the performance funding system that is currently in the Federal regulations. We are requesting $1.6 billion in operating subisidies for the coming year.

Its primary elements are a 7.5-percent inflation rate for nonutility expenses, a 13-percent inflation rate for utilities, it predicts 7-percent increase, as does HUD in rental income, and an additional $53 million for increased rent-to-income ratios.

The differences between the Council's and HUD's estimates, I think, are probably most important to note. First, HUD continuously underestimates utility rate increases causing housing authorities to come back before this and other committees in the middle and the end of fiscal years asking for supplemental appropriations. We certainly do not like to appear as if we are coming hat in hand having overrun our budgets. But, in fact, if the appropriations have been lowered intentionally at the beginning of the year, in fact we end up in the same position of asking and needing to seek a supplemental. If they had been more accurate to start with we would not have to go through that.

DIFFICULTIES CREATED BY HUD ASSUMPTIONS

A number of other assumptions which HUD is making which we have severe difficulty with. First, they are assuming a $90 million contribution from local and State governments. The council finds that totally untenable. First of all, the data base that HUD is using is totally inaccurate. They called local housing authorities and asked what contributions had been given by local governments and, in fact, the answers were not distinguished between capital grants and operating subsidies and the two are in no way the same. Our local mayors and Governors are often more than happy to give us capital grants, which are in accordance with the community development block grant regulations of previous years and in no way can that be interpreted as projecting use of that money for operating subsidies.

Even if our cities and States were in a position to contribute operating subsidies to housing authorities operations, it is unlikely that even the most generous of them and the richest of them would do so based upon a fiat from HUD. HUD has included this assumption in their budget without the slightest conference with mayors or Governors. That is no way to conduct business and the prediction is totally unrealistic.

We have also included a projection of increased income from food stamps and the council opposed that inclusion. The residents are paying from 26 to 30 percent of their income now based upon the new bill. They indeed have borne their share of other Federal cuts and basically on their behalf and for the Council we say enough.

MULTIYEAR FUNDING SYSTEM DESIRABLE

One word before I close on the bill, the recent Senate bill. The council certainly believes that a multiyear funding system for public housing is desirable. Indeed, the principle of predictable operating subsidies would assist in our management capabilities, our planning abilities, and lend some measure of stability in our operations. The important points, though, I think that there are sufficient moneys, certainly in the first year, which as I have mentioned we think to be $1.6 billion, and, thereafter, to at least review what has been appropriated in accordance with the fact that come in.

The unpredictability of utility rates, the Middle East instability, natural gas deregulation, general inflation rate, is somewhat speculative. It is essential that this committee and your colleagues look at the facts when the data comes in. We cannot set into stone either HUD's, the committee's, or even the council's predictions. We have to see how the situation develops over time.

TWO-TIERED SYSTEM FOR HOUSING AUTHORITIES

The second part of the Senate bill that I think requires comment is the suggested two-tiered system for housing authorities. Namely, tier A which will have 3-year contracts and tier B which will only have 1-year contracts because of a variety of factors. The distinction between and among the small, medium, and large housing authorities we do find commendable and there is great variation. However, we cannot help but point out a number of concerns regarding the second tier and the treatment of those housing authorities.

First, the obvious stigma of being a mismanaged housing authority and being put into a tier B category is something we could do without. We have had enough members of HUD prate about mismanagement by the Devil incarnate, and if it was only to resolve that there will be no problem in public housing. That is obviously rather shortsighted.

The more serious aspects of it which we no way support are the levels of discretion given to the HUD Secretary. The 15 percent up or downward discretion in funding that the Secretary would have as the bill is currently presented would put us precisely in the same situation that we were in 1981 and, short of your supplemental, would be in 1982. The 15-percent difference for housing authority to have fixed costs for up to 50 percent of its expenses turns into a 30-percent reduction in the amount of review available to it. No business, public or private, can operate that way.

The intervention that is allowed by the Secretary and to the management of housing authority is also of grave concern to us. The gap between HUD and the Council of Large Housing Authorities is at the maximum best described as a canyon and although, as I mentioned, we are working on a variety of issues, the credibility difference between us is vast and the vulnerability of housing authorities to arbitrate actions on the part of HUD makes the level of discretion suggested a totally untenable situation.

Therefore, in summary, I would reiterate that the council would like to recommend a $1.6 billion appropriation for 1981, that the appropriations thereafter be considered very seriously in the light of actual inflation rates for both nonutility and utility rate expenses. We certainly support the idea of a 3-year authorization, however, emphasize the need for the first year to be sufficient so we need not come back for a supplemental, and we emphasize our willingness to explore the concept of the two-tiered system with the committee and its staff to address both the committee's concerns and some that we have raised.

Thank you for this opportunity and again for your support on that critical supplemental bill.

Senator D'AMATAO. Thank you very much, Mr. Rigby. We will see what we can do in terms of working with you and staff on the two-tiered system. I do think that there should be some level of discretion, up or down, that the Secretary of Housing should be allowed.

What level do you think will be appropriate?

Mr. RIGBY. I think that the discretion as presented in the bill merely is too loose and that it can be total dollars. If the discretion was, for example, on nonutility-related expenses, then, in effect, you are not taking the fixed course of the housing authority and forcing them to use their nonutility revenues for that purpose. That bill must be paid and if you hold 15 there is really 20, 35.

Although we concur that the Secretary should have some discretion, as it is right now in the bill it is completely open.

Senator D'AMATAO. Maybe you can submit that recommendation to staff for their consideration.

Mr. RIGBY. Thank you.

Senator D'AMATAO. Thank you very much.

[The statement follows:]

INTRODUCTION

Good afternoon Senator Garn, members of the Committee, and ______________ (other as appropriate). My name is Robert Rigby and I am the Executive Director of the Jersey City Housing Authority. I am here to testify today on behalf of the Council of Large Public Housing Authorities (CLPHA), primarily on the issue of public housing operating subsidies for Fiscal Year 1983.

FY 82 SUPPLEMENTAL

Mr. Chairman and members of the Committee, I would like to express the Council's deep appreciation and gratitude to you for the action which you took last week in approving a supplemental appropriation of $254.4 million for public housing operating subsidies for FY82. This courageous act, in a very difficult federal budget year, will enable PHAs to meet their obligations without the disastrous budget cuts which would otherwise have been inevitable, cuts that would have produced serious reductions in public housing service levels, management and maintenance operations, security, and the ability to carry out routine maintenance functions -- and the consequent decay and loss of value in the public housing stock which has been financed over the years with public tax dollars. Yours is truly a "conservative" action, since it can be expected to preserve the value of the public housing stock, now valued at nearly $70 billion. The action of this Committee also shows that you are concerned with the nation's poor. We are especially appreciative, Mr. Chairman, of your own personal stand since we recognize that there is relatively little public housing in the state of Utah, and your position is therefore one of leadership based upon your national level of concern and understanding for the problems of low-income people across the country.

COMMENTS ON HUD TESTIMONY

Before discussing operating subsidies for FY83, Mr. Chairman, I would like to comment briefly upon the testimony before this Committee last week by HUD Secretary Pierce and General Deputy Asst. Asec. Abrams. I understand that Mr. Abrams testified that HUD has now released all of the FY81 and FY82 operating subsidy money that is due up to this time. Mr. Chairman, although Mr. Abrams has made this claim before, it still is not the case. The HUD Central Office has apparently issued some instructions to its Field Offices to begin making payments of some funds at the levels prescribed by HUD for FY82, which is only 75% of the eligibility level for FY81. The reality, however, is that these funds have only begun to trickle out of HUD. Most PHAs still do not have these funds in hand, and Mr. Abrams' assurances that PHAs have already received this money are not accurate.

I am attaching to my testimony a survey of those PHAs who are members of the Council of Large Public Housing Authorities, along with some additional PHAs that have joined CLPHA in a lawsuit against HUD. This survey provides an up-to-date summary of whether or not these PHAs had received funds as of last Friday, May 21. We hope that these funds are indeed forthcoming, but the truth is that many of the largest PHAs in the nation are now in their fifth month of operations for FY82 without receiving a penny from HUD. This continues to be a disastrous situation for these PHAs.

Mr. Abrams also asserted that the Council of Large Public Housing Authorities agreed to HUD's current procedure of funding PHAs for FY82 at 75% of the FY81 eligibility levels. Again, we protest that this is not the case. Several months ago, we met with Mr. Abrams to protest HUD's planned allocation of FY82 funds at 60 per cent of the FY81 eligibility levels, and the continued delay in releasing the funds. At that meeting, Mr. Abrams proposed to raise this level to 75% and issue the funds immediately at that level. While we can certainly agree that 75% is better than 60%, we have never agreed that this is an acceptable formula, especially since the money continues to be delayed by HUD. HUD's procedure of funding at 75% of FY81 levels means that PHAs are currently only being funded at approximately 59% of the need estimated by the Council for FY82 ($1.4 billion). PHAs are therefore still woefully underfunded in this year, and face serious current cash-flow problems that are forcing them to lay off needed staff and resort to unorthodox financing methods.

The basic reason for this additional delay on HUD's part is the inability of the Department to decided upon a way to allocate the FY82 money within the existing PFS regulations. For this reason, Mr. Chairman, we are especially grateful for your Committee's report language in the FY82 supplemental bill that HUD must allocate the entire FY82 appropriation within 30 days and according to the current PFS formula.

FY83 OPERATING SUBSIDY NEEDS

Mr. Chairman, I would now like to turn to our estimate of FY83 funding needed for public housing operating subsidies. In most cases, the method which the Council has used to develop these estimates has relied upon figures that are virtually identical to the numbers which have been calculated by the HUD Performance Funding System. We continue to believe that this model provides the best system currently available for establishing the funding level for operating subsidies, and that subsidies should be requested by HUD at these levels until some alternative system has been proposed, discussed, approved and put into place.

One major area where we have differed with HUD in our cost estimates is in the projected rate of inflation of utility costs. HUD has consistently been required by OMB to underestimate the utility inflation rate, **with** the result that PHAs must always come back to this Committee asking for supplemental appropriations when HUD's estimates prove too low, as they always do. We greatly appreciate this Committee's having provided these supplemental appropriations. The need for supplementals, however, would be greatly reduced if the HUD/OMB estimates were more accurate in the first instance.

For FY83, we are requesting $1.611 billion in operating subsidies. I am attaching to my testimony a break-down of the line items included in this amount. When a 3.2% increase in the number of public housing units is factored out of this increase, this represents an increase of 11.2% over the Council's estimate of the need for FY82. Please note that public housing costs (i.e. expenditures) are projected to grow at less than 10% per year, but since income is only projected to grow at about 7%-8% for the year, the subsidy, which fills the gap between the two, grows at about 11%. This clearly proves that public housing costs are in fact not growing out of control, especially when it is considered that nearly 50% of these costs are due to energy costs.

Although oil costs are expected to remain stable or drop slightly throughout much of this year, there are already signs that they will rise again in the Fall and Winter of 1982, and natural gas prices are expected to rise by as much as 20% this year. These are cost increases which are facing all real estate operators in both the private and public sector.(1)

Looking at some of the other elements in our recommendation for FY83, we have projected the inflation rate on the non-utility expenditures at 7.5%, and we have accepted HUD's most recent projections of a 7% increase in per unit income, based upon increases in tenant income, over and above the additional revenues that would be generated by higher rent-income-ratios for FY83.

HUD has not been clear about how it has kept its estimate of operating subsidy need to only $1.075 billion, the amount requested by the Administration. HUD did include with the Budget Request a statement that it would propose legislation for FY83 to include Food Stamps in the calculation of tenant income, and to institute minimum rents equal to the cost of utilities. It is the Council's understanding that there is also included in the FY83 budget estimate by HUD a factor of $90 million attributed to state and local contributions to the operating subsidy. The Council is opposed to counting food stamps as income, and believes that the $90 million figure from state and local contributions is absolutely unrealistic.

We have, however, included an additional $53 million in our FY83 projections to reflect the higher rent-income-ratios expected to be in force in FY83.

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(1) I am also submitting as an attachment a recent study CLPHA has conducted of rising utility costs projected for 1982 and 1983.

We might suggest that your Committee obtain testimony from state and local governments themselves on their ability to make the additional $90 million in contributions to operating subsidies which HUD says is possible.

COMPARISON WITH PROVISIONS IN BILL APPROVED BY SENATE AUTHORIZING COMMITTEE.

I would like to comment, Mr. Chairman and members of the Committee, on some of the provisions in the bill recently approved by the Senate Authorizing Committee for FY83, since some of the provisions of this bill will reflect upon the need for operating subsidies.

The Council certainly believes that a multi-year funding system for public housing is desirable. We could endorse the legislation that has been adopted by the Authorizing Committee, providing for a three-year funding period for FY83-FY85, if the first year funding level were adequate and if there was some provision for the recognition that the funding level would go up over the three-year period due to costs beyond the control of the local PHAs. The principal "cost beyond control," as you know, is the continuing rise of utility prices, and these increases must be reflected in operating subsidy levels.

We believe that the necessary funding level for FY83 is $1.611 billion, and we hope that the stepping upward of this level in FY84 and FY85 will be possible within the provisions of the Authorizing legislation and the results of the predictions of operating subsidy needs that are made by the HUD Performance Funding System.

The amounts provided in the current Authorization bill, however, are substantially too low, in the opinion of the Council.

Some PHAs have apparently expressed a willingness to forego inflationary adjustments over the 3-year period in return for the fixed authorization. Many of these are smaller PHAs that do not now rely heavily upon the public housing operating subsidy. The other side of this picture, Mr. Chairman, is that the 130 largest PHAs, with over 60 per cent of the units and receiving 82 per cent of the operating subsidy, would be seriously hurt by the substantial short-fall that would result if there is no recognition of necessary cost increases over the three-year period.

At the same time that these costs are going up, the ability of PHAs to conserve energy is limited by the modernization funding that is provided by HUD, funding which HUD continues to limit and delay.

The "two-tiered" system also seems to us to have built into it some positive concerns for the many differences that exist between large and small PHAs, and we appreciate the fact that this recognition is being given. The large PHAs certainly experience a variety of conditions that are substantially different from medium-sized and small PHAs, and HUD's treatment of these Authorities, and the provision of funding to these PHAs, should differ accordingly. We do have a number of concerns, however about the provisions of the "two-tiered" system that are presently contained in the current authorizing legislation.

One of these concerns is that PHAs to be singled out for special concern will generally be labeled as having been "mismanaged" at the local level. While we recognize that mismanagement is a fact in some cases, it is a mistake to imply that local mismanagement is root of all of the problems that public housing faces today. It is much more important to recognize the fundamental causes of these problems, related to the urban environment and changing social conditions, and the neglect of funding for adequate maintenance and modernization activities over the years.

We oppose the provision allowing HUD to adjust local PHA funding levels by 15% upwards or downwards on a discretionary basis. And we especially oppose those provisions which would allow HUD Central an almost unlimited authority to intervene in local PHA affairs at the Secretary's discretion. This would create a disastrous set of conditions for local PHAs.

For these and other reasons, we believe that the concept of a two-tiered system is a positive and constructive approach to the funding of public housing, but would like to explore this concept more fully with the Committee and with HUD, particularly as compared with other approaches to recognizing and accounting for the differences among PHAs.

For example, the Council believes that there should be better incentives and performance standards built into the PFS, and that these standards should be developed using more particularized data reflecting the different conditions experienced by PHAs of different sizes, tenant composition, locations, etc. HUD is considering new ways of adapting additional "range tests" to PHA budgets for Authorities in different circumstances, and your own staff has given considerable attention to these issues.

SUMMARY

To briefly summarize our recommendations:

- the Council would like to recommend that you appropriate $1.611 billion in public housing operating subsidies for FY83;
- we believe that the current funding levels contained in the Authorization bill are inadequate;
- we support the idea of a three-year authorization, and believe that this is a positive and constructive approach to increasing the reliability and predictability of public housing funding, provided that the first year funding level is adequate and that there is a recognition that costs beyond control will result in the need for higher funding levels in the second and third years (supplemental appropriations may be the best way to deal with these increases);

- we would like to explore the concept of a two-tiered system, and would also like to see the results of the HUD PFS study, including the detailed findings with respect to the feasibility of using particularized data to establish additional range tests for PHAs with different characteristics.

Thank you, Mr. Chairman, for this opportunity to testify before you today.

Current CLPHA Estimate of Need for Public Housing Operating Subsidy, FY82 & FY83.

	($ millions)	
	FY82	FY83
Allowable Expense Level (AEL)	1469	1630 (1)
Utilities		
Current year	1036.1	1264 (2)
Util. adj. for previous year	67.9	48
Sub-total utilities	1104.0	1312
IPA (audit)	5	5
Income (with no changes in regulations or rent-income ratios)	(1221)	(1348) (3)
PFS BASE	1357	1599
Increased Rent-income-ratios		
All tenants to 26%	(15)	(40)
New tenants to 30%	(5)	(13)
Insurance	17	20
Non-PFS Authorities	47	45
GRAND TOTAL	1401	1611

The above estimates do not include any reductions in operating subsidy due to:
- de-regulation;
- mandatory reductions in utility consumption equal to private market "savings";
- shift to a rolling base for utilities;
- elimination of utility adjustments;
- additional state and local contributions;
- mandatory paybacks on energy conservation expenditures above and beyond those budgeted by PHAs.

NOTES ON CALCULATIONS:
1) (1469)x(1.032)x(1.075); assuming 3.2% increase in units; 7.5% cost inflation.
2) (1036+48)x(1.032)x(1.13); same 3.2% increase in units; 13.0% cost inflation for utilities, based on CLPHA survey and projections.
3) (1221)x(1.032)x(1.07); same 3.2% increase in units; assume a 7% increase in per unit income, if no change in regulations or increase in rent-income ratios.

LATEST STATUS: HUD ALLOCATION OF FY81 AND FY82 FUNDS - 5/21/82

Housing Authority	FY	Current Status
Chicago	Jan.	FY81 Supp: Received 4-22-82 FY82: Received advance against '82 ($8½ million last November and $8½ million in Jan.), and on 4-22-82 got funds for first two quarter of '82 ($14.5 million)
Omaha	Jan.	FY81 Supp: No funds yet FY82: HUD has confirmed payment to HA within 30 days, minus HEAP money received from state, but as of yet, no money.
Kansas City, KS	April	FY81 Supp: HUD told them they would be receiving a letter re '81 money stating elimination of waiver, but still no money. FY82: HUD couldn't tell them anything about when the '82 money would be released to them. As of now, they don't have an approved budget for 1982.
St. Paul	April	FY81 Supp: Received check 5/17 FY82: Have no money yet. Will be meeting with Area office on Tues. 5/25.
Toledo	July	FY81: HUD Area office told them to submit request for money which they did this past Monday. Have heard nothing since that time.
Minneapolis	Oct.	FY81 Supp: Just received FY81 money along with an approved budget for 1982.
Akron	July	FY81 Supp: Received May 17.
Jersey City	April	FY81 Supp: Received FY82: No Funds yet. Request is still in HUD Central pending central review even though funding is only supposed to be 75% of last year's PFS.
Newark	April	FY81 Supp: No money yet FY82: No money yet
New York City	Jan.	FY81 Supp: Received FY82: Received 4 months funding at 75% of '81 PFS funding
Wilmington, DE		FY81 Supp: Received May 6 FY82: No money yet
Boston	April	FY81 Supp: No money yet. Told $3.3 million will be received 3-4 weeks. FY82: No money yet. Owed $8.1 million for their FY83 (1st quarter @ 75% of last year's funding.)

Housing Authority	FY	Current Status
Rochester	Oct.	FY81: Are receiving the FY81 supplemental funds in increased monthly allotments of thei FY82 PFS subsidy.
New Bedford	Jan.	FY81 Supp: Received supplemental with no utility adjustments FY82: Have recevied no money yet. HUD Area said they have processed request for funds and they should get them soon.
Philadelphia	April	FY81 Supp: Received in April FY82: Received 75% of last year's PFS
Baltimore	July	FY81 Supp: Received
Cambridge	April	FY81 Supp: No funds yet. HUD told them 2-3 weeks. FY82: No funds yet
Harrisburg	Jan.	FY81: No funds yet. HUD advised them that $140,000 was reserved for this vs. $202,000 budgeted by HHA. HHA also owed $518,000 in utility adjustment. FY82: No funds yet. HUD letter of 4-30 state $523,265 had been obligated, or ½ of operatin subisdy at 75% of '81 PFS.
Portland	April	FY81 Supp: Received funds FY82: No funds yet.
Cincinnati	July	FY81 Supp: No funds yet. HUD called them today (!) re elimination of waiver asking them to submit request for funds
Cuyahoga Metro. (Cleveland)	Jan	FY81 Supp: No funds yet FY82: Receiving checks month by month at 75% of '81 PFS minus HEAP
Pittsburgh	Jan.	FY81 Supp: Received this week FY82: Received this week, 6 months of funding @ 75% of '81 PFS.
Atlanta	July	FY81 Supp: Received on May 4 $1.7 million of $2,977,484 owed, and assured of full allocation except utility adjustment
Bridgeport	Oct.	FY81 Supp: Have not received additional funds yet. HUD says it will increase 85.5% PFS to 96.5%.
New Orleans	Oct.	FY81 Supp: Have not received yet. Have been advised they will get 96.5% PFS out of '81 money. Also owed utility adjustment.

Senator D'Amato. Mr. Robert D. Banters, senior staff vice president of the National Association of Home Builders. Is Mr. Banters here?

He is not.

Melvin J. Adams, vice president for housing, National Association of Housing and Redevelopment Officials.

STATEMENT OF MELVIN J. ADAMS, VICE PRESIDENT FOR HOUSING, NATIONAL ASSOCIATION OF HOUSING AND REDEVELOPMENT OFFICIALS

Mr. Adams. My statement has been introduced in the record and I will try to briefly summarize it.

I am Melvin Adams. I am vice president for housing of NAHRO, and I am director of Dade County, Fla., Department of Housing and Urban Development.

Senator D'Amato. You are getting most of my constituents from New York.

Mr. Adams. We are getting some from the Caribbean also.

SYNOPSIS OF STATEMENT

A lot of us will like to thank the committee for doing something that has helped them and has helped the country. If there was some way that I could say it so it was clear to everyone reading the record that we really mean it, that this committee has done a very important thing in preserving the housing stock of existing housing by the $254 million supplemental and we and even more important, our tenants, are most appreciative of the actions of the committee.

It is not an easy thing to do in these times and it is even less easy for a committee that is in the majority control. So we are most appreciative.

We believe in community development and the UDAG appropriations. We would prefer seeing them at the full authorization level rather than the reduced level of last year's appropriation. We certainly support continuation of the section 312 program and the section 108 program. We prefer the present section 8 existing housing and moderate rehabilitation program on the assumption that if something isn't broken, don't fix it. We think the program is working well and the modified section 8 certificate program is essentially a device to cheapen the program and give assistance to low-income families.

We believe that there should be a housing production program and the comprehensive improvement assistance program ought to be funded out of new funds rather than recaptured funds.

CONCERN OVER PUBLIC HOUSING OPERATING SUBSIDY

Our biggest concern is in the area of public housing operating subsidy. It is an important resource in this country, both the physical resource and the human resource, and we need an adequate level of funding. On the other hand, we shouldn't be coming asking for more money. Each of us ought to, and most of us do, look at our operation, how we can be more efficient. For example, in Dade County although it is a little thing, we have cut our painters from 25 to 10 by going to a spray paint technique rather than brushes and rollers. We think we can get more production with 40 to 60 less staff. And there are other little ways of doing it. We would like to conserve energy but we don't have any hearing plant fortunately.

We think that the administration's projection of a bill, $75 million for operating subsidy, is based on a number of very false assumptions. The assumption that food stamps will be counted as income generates $100 million more income, our reading of the Congress is that is unlikely to happen and, therefore, the administration's projection is at least $100 million short. The administration's estimate that $50 million additional income will result from increasing the—from 10 to 20 percent the amount of tenants rent can go up a year. If that is not approved by the Congress, it means the administration is another $25 million short.

The administration estimates an arbitrary reduction in the consumption of energy, NAHRO and other housing authorities, Council of Large Public Housing Authorities, are working with HUD to develop a mechanism for saving utility consumption, but until that mechanism is developed and is in place, any assumed saving is arbitrary.

The final saving which as a former local official you can appreciate as well as I can, the State and local government will come up with $91 million, I think maybe some people in this administration ought to get out in the country and see what it is like. They have been in Washington too long.

Senator D'AMATO. Welcome to the real world.

Mr. ADAMS. The real world. At least the real world that I see, it will never happen. So I would like them to come to some local tax hearing when the budget is being discussed. It is just unrealistic and it won't happen.

3-YEAR AUTHORIZATION APPLAUDED

I would like to commend the legislative committee for coming up with a 3-year authorization. I think NAHRO think it is important. We think it may be a little bit on the light side, especially if the need is $1.6 billion, as we believe it is, in fiscal year 1983, and that the level ought to be increased to $4.8 billion. Again, if the economy is healthy, if it grows in a noninflationary rate and energy costs don't suddenly get out of sight like they were, then it is adequate. But maybe there can be committee language on what assumptions are if they prove to be greatly wrong, the amount can be revised.

We also like the two-tier system. We think it is a major step forward and rather than have the Congress try and rigidly limit the manner in which the Secretary can implement it, we think possibly an alternate approach would be to urge the Secretary to work with housing authorities in developing an effective system, have it come back to the committees for their approval as regulations have to, because NAHRO at this point could not spell out in detail how it ought to work.

With that, hopefully brief summary, I am available to leave or answer questions.

Senator D'AMATO. Mr. Adams, I want to thank you for your presentation and particularly for your incisive remarks with regard to the Washington view that local and State governments will contribute $91 million. Even where there are severe cutbacks, I think that is rather unlikely. It cuts the quality of service and the deterioration in the housing stock will continue and be exacerbated.

I share your concern for that and maybe in conference something can be done to deal with that matter.

[The statement follows:]

STATEMENT OF MELVIN J. ADAMS, VICE PRESIDENT FOR HOUSING, NATIONAL ASSOCIATION OF HOUSING AND REDEVELOPMENT OFFICIALS

Mr. Chairman and members of the Committee, I am Melvin J. Adams, NAHROs' Vice-President for Housing, and Director of the Dade County, Florida Department of Housing and Urban Development.

NAHRO, as you know, is a 48-year old Association of professionals who administer low-income housing, rehabilitation, and community development programs in localities across the country. We represent over 6000 individuals and 2000 agencies involved in carrying out these programs. I appreciate the opportunity to appear before you today to comment on fiscal year 1983 appropriations for housing and community development programs and to outline NAHRO's positions on what we believe to be the critical funding issues in the areas of housing and community development.

Mr. Chairman, my statement will be divided into five parts:

- First, I would like to present NAHRO's general reaction to the Administration's fiscal year 1983 funding proposals for housing and community development.
- Second, I would like to comment specifically on proposals for funding the Community Development Block Grant, the Urban Development Action Grant, and other community development programs.
- Third, I would like to state NAHRO's view on the case for adequate funding for the Section 8 existing and moderate rehabilitation program and new production of federally assisted low income rental housing.
- Fourth, I would like to call the Committee's attention to what NAHRO believes are serious issues relating to existing low income rental housing stock, and the need to provide adequate modernization funds to preserve it.
- Fifth, and most important, Mr. Chairman, we want to discuss with you what NAHRO believes to be the most urgent problem facing those of us who are committed to housing low income Americans: providing adequate and predictable levels of operating subsidy to public housing authorities. We would also like to comment on certain HUD practices and policies which we believe raise serious questions about this Administration's commitment to the successful management of our low-income housing resources and to the people they serve.

Before commenting on fiscal year 1983 appropriations levels let me comment on the fiscal year 1982 funding situation. As I am sure you are aware, the actual operating subsidy shortfall for fiscal year 1982 appears to be significantly greater than the Administration is willing to admit. NAHRO has outlined its concerns about the Administration's calculations and assumptions in its April 26, 1982 letter to you, Mr. Chairman. Suffice it to say here that the 1982 operating subsidy crisis is not yet behind us.

I. THE ADMINISTRATION'S FY83 FUNDING PROPOSALS

In NAHRO's view, the first full budget of the Reagan Administration reflects not only an intent to curtail spending for housing and community development for the short run, it also signals a long range plan to sharply change both the nature and the dimension of this assistance.

The actual HUD outlays for fiscal year 1983 are estimated at 10 percent less than in the current fiscal year--$13.1 billion in contrast to $14.6 billion. But outlays are only the end result of earlier allocations of budget commitments--the real story is in the request for budget authority. The depth of the curtailment in HUD's activity is starkly clear in the budget authority numbers: a reduction from $33.4 billion in 1981 to $13.1 billion in 1982 to $684.7 million in fiscal year 1983--a total 3-year reduction of 98 percent.

The proposed 1983 HUD budget virtually dismantles all of the Department's programs for new construction of assisted housing for lower income families. It holds at current levels (which included rescissions from earlier authorizations) the budget for HUD's Community Development Block Grant (CDBG) and Urban

Development Action Grant (UDAG) programs. It repeals the Section 312 loan program; it eliminates loan guarantee authority which enables cities to use CDBG funds as a pledge and thus does not add to the budget authority. It cuts back the level and scope of activity for the mortgage insurance programs of the Federal Housing Administration (FHA). For on-going operating programs, such as public housing, Section 8 and other assisted housing, the budget seriously curtails federal operating assistance. Some existing units would be sold or demolished with no replacement. If the Administration's proposals were accepted, a total of eleven HUD programs would not just be curtailed, they would be eliminated.

Given the kind and extent of the reductions in the proposed HUD budget for FY1983 and the alternatives proposed, the future mission of the Department, and indeed the federal government itself, as a major actor in housing and community development, is cast into doubt.

II. COMMUNITY DEVELOPMENT

Mr. Chairman, NAHRO strongly supports funding the Community Development Block Grant and UDAG programs at the authorization level of $4.166 billion for FY1983.

The current year's appropriation level ($3.456 billion and $440 million respectively) is an actual reduction for cities beyond the across-the-board budget reductions. The level appropriated does not account for inflation in costs. In the case of CDBG, the program expanded to include over seventy additional entitlement communities. Also the change in allocation formula to a 70%-30% split for entitlement and non-entitlement (small city) categories from an 80%-20% split, will further reduce actual funding for entitlement communities.

Related programs such as those of EDA and the Small Business Administration and others have been slashed so dramatically that the overall reduction in community and economic development resources available to localities in 1982 is in excess of 50%. If one adds the impact of inflation, the actual reduction is even more devastating.

It is wrong to speak of economic recovery and revitalization and then deny resources to state and local governments to provide the basic infrastructure and incentives to make that recovery possible. An appropriation level of anything less than the full authorized levels for CDBG and UDAG would be disastrous.

NAHRO, the U.S. Conference of Mayors, the National League of Cities, and the National Association of Counties have conducted a survey of cities and counties to determine the accomplishments of the CDBG and UDAG programs and the impact of the actual and proposed funding cuts on program progress and activities. The results of that survey are currently being analyzed and will be submitted to the Committee in the near future. Preliminary data shows that local communities have had to defer projects which would improve public health and safety as a result of the cuts. Rehabilitation of substandard housing units has been slowed. But, perhaps the most disastrous impact this Administration's proposals would have on our cities' and counties' revitalization and development efforts would be to allow millions of dollars already invested by communities to go to waste. Local governments have committed those dollars to activities such as land acquisition, site clearance and improvements, and other activities necessary to package parcels of land for development. We can cite projects, many in your own state, that have committed CDBG funds for such activities on the expectation of receiving assisted housing funds from HUD. These activities funded under the CDBG program are so closely related to local housing and development strategies that any further reduction in CDBG funding along with proposed elimination of housing production funding would have a profoundly negative impact on the value of investments already made.

Urban Development Action Grants

The Urban Development Action Grant program, authorized by the Congress in 1977, was intended to fill a gap in the CDBG program. While CDBG is well-suited to provide communities with a basic level of assured, on-going financial support for fundamental community and economic development activities, it was not designed to respond to unique, perhaps one-time, opportunities to quickly capture and leverage significant private investment opportunities as they emerged on a project-oriented basis. Essential elements of the UDAG program are:
(1) quick turn-around time--in some instances, as short as a six month time frame between conception of a project and completion; and (2) front-end, firm commitments of private investment money to carry through the project on a fast-track schedule.

Since its inception, UDAG has achieved an impressive record of leveraging private investment in local economic development projects. Action grant projects that received approval during fiscal year 1980 (351 grants for a total of $646 million) will leverage $4.4 billion in private investment. Over 194,000 jobs are being created or retained by these approved projects. Of these jobs, 100,700 will be new permanent jobs created at an average cost of $7,700 per job. Local governments will receive a net increase of $126 million tax revenues from the 1980 approved UDAG projects. Over 21,000 housing units will be constructed or rehabilitated in those projects having housing components. We urge this Committee to recommend the full $500 million appropriation level for this program.

Section 312 Rehabilitation Loans

As you know, Mr. Chairman, NAHRO has a long-standing record of support for the Section 312 Rehabilitation Loan program. We are disappointed that the Senate Banking Committee has not seen fit to endorse continuation of the program, but we are pleased that there has been an effort in the House to keep it alive. Assuming the Congress will ultimately decide to reauthorize the 312 program, we urge the subcommittee to continue funding it in fiscal year 1983 at authorized levels.

The Section 312 Rehabilitation Loan program has been used to rehabilitate over 100,000 homes in over 700 communities. It has been a unique and successful program which returns funds to the federal government as loan repayments are made. In fiscal year 1981, nearly one-third of the program funds were provided from loan repayments. The program provides an opportunity to target limited resources to areas of greatest need and greatest capacity.

Section 108 Loan Guarantee

Lastly, Mr. Chairman, NAHRO strongly supports the continuation of the Section 108 loan guarantee program at the authorized level of $225 million in FY83. The Section 108 program has received accelerated use in recent years. Our members have found the Section 108 loan program to be particularly useful in financing acquisition and rehabilitation of local structures for use in housing or economic development projects. As you know, because the Section 108 loan program requires participating local governments to pledge their future CDBG monies as part of the loan security agreement, there is no additional cost to the government should the local government fail to retire the loan. Moreover, because of the cost burden of forfeiting future CDBG funds, local communities carefully weigh the risk involved in projects proposing to use the loan guarantee. NAHRO believes the Section 108 loan guarantee program represents an exemplary federal, local, private partnership. We need additional, not fewer, such tools.

III. ASSISTED HOUSING PROGRAMS

Mr. Chairman, our national need for new housing remains acute, and the Senate Banking Committee's authorized level is simply inadequate to meet that need.

Nationally, public housing authorities are still able to house only 13% of the eligible population. Statistics from HUD's Annual Housing Survey show that as of 1978, over 7 million households were still housed in substandard or overcrowded conditions; over 3 million households were paying more than 60% of their incomes for rent. As household formations, abandonments and condominium conversions increase, the national rental vacancy rate has fallen below 5%. Production of rental housing in the private market is almost non-existent. Short supply and low vacancy rates are putting tremendous inflationary pressures upon the existing housing stock. For some communities, the vacancy rate is so low that new production is the only alternative for meeting their housing need.

NAHRO strongly supports an appropriation for fiscal year 1983 to continue new construction of housing units for lower income families. This should include a modest level (24,000 units) of new public housing construction and funding for 100,000 units under a new rental housing production program for low and moderate income persons.

Finally, NAHRO does not support the Administrations' proposed modified Section 8 existing program. Rather, NAHRO suggests appropriations being requested by the Administration to fund the 106,000 certificates be used instead to fund the current Section 8 Existing and Moderate Rehabilitation programs.

IV. PUBLIC HOUSING MODERNIZATION

Mr. Chairman, I would like to speak briefly to the public housing modernization program.

As you know, in 1980 the Congress initiated a new Comprehensive Improvement Assistance Program (CIAP) targeted toward the rehabilitation and modernization of the existing public housing stock and public housing management systems, including bringing rehabilitated units up to energy efficient standards.

HUD has estimated that, of the 1.2 million existing public housing units, about 90,000 of these require major work averaging about $25,000 per unit; another 110,000 require more modest work of about $8,500 per unit; totalling about $3 billion for all major renovation work. Another $1 billion is required for basic maintenance and repair work on the remaining one million fundamentally sound structures. Thus, for a relatively modest cost we could return approximately 200,000 substandard units to decent, safe, sanitary and energy efficient conditions; and bring all public housing units into good repair. Without this modernization assistance, we stand to permanently lose many of these units, particularly those 90,000 in worst condition. It would cost $70 billion to replace our public housing stock today.

The Administration was initially conscientious in their efforts to get the CIAP program moving, but now what is the Administration's position? While in both 1982 and 1983, budget authority for modernization of public housing is proposed at the level of current commitments--$1.8 billion in each year--it is authority proposed to be recaptured in its entirety from earlier authorizations. Mr. Chairman, this approach is simply a shell game. It is a game with no winners: not the taxpayers who have paid for our invaluable public housing asset; not the low income elderly and the families who now live in public housing; not the low-income elderly and families who seek to live in public housing; not the construction industry which desperately needs work.

As you are aware, local housing authorities manage a very valuable but aging capital asset. The Comprehensive Improvement Assistance Program is a well conceived and well designed program, congressionally -mandated with the intent of helping local housing authorities to continue to maximize the use of this housing stock. We strongly urge you to give this program a chance to increase the usable stock by maintaining the original Congressional commitment to modernization through a separate and adequate appropriation.

We believe that it is highly important that the CIAP program be funded in FY83 at the fully authorized level. The longer we delay these improvements, the more units will deteriorate, the more needed repairs will increase and the more costs will grow.

V. PUBLIC HOUSING OPERATING SUBSIDIES: THE FEDERAL ROLE IN ADMINISTERING AND FUNDING THE PROGRAM

Mr. Chairman, before commenting on what we believe to be the most urgent priorities facing those of us who manage public housing--namely the provision of adequate and predictable levels of operating subsidy assistance--I would like to raise certain issues which I believe cast doubt on this Administration's commitment to the successful management of our public housing resources.

The question here, Mr. Chairman, is the nature of the performance of this Administration in carrying out the Congressionally-mandated program of operating assistance to public housing agencies. I would like to give you a few examples of the policies that cause chaos and instability at the local level with the hope that your Committee will encourage HUD to end its own unpredictable and "bad" management of PHAs"

- PHAs received only 85.5% of operating subsidy eligibility in FY81, yet the Administration refused to support the request for supplemental funding;
- After Congressional action in December, appropriating funds for an FY81 supplemental, it was not until three months later that HUD authorized its field offices to begin the distribution of these supplemental funds. To date, most agencies have not yet received funds which are only sufficient to take them to 96.5% of their eligibility for FY1981.

- In addition to the delay, HUD arbitrarily and unilaterally imposed a condition on payment to PHAs of the FY81 supplemental monies, requiring that PHAs acknowledge that the funding is in full settlement of FY81 costs (despite HUD's acknowledgement that it was only funding 96.5%), including utility adjustments (currently estimaed at $67.5 million) which HUD regulations provide should be funded out of the next year's (FY82) funds.

- Three months after fiscal year 1982 has begun for over 40% of PHAs, HUD issued instructions for interim funding based on 75% of the PHAs' 1981 eligibility.

- Over six months after receiving a request from the Congress, HUD issued a letter attempting to show the FY82 operating subsidy needs at $1.152 billion, when the Congress, a good number of HUD staff, and all PHA administrators know that that figure is substantially under the real need for this fiscal year.

- Within two months of Congressional funding of FY82, HUD submitted a series of recission requests effectively designed to destroy any on-going commitment to housing low income persons.

- HUD, without following the rule-making procedure, attempted to change the policy governing total development cost limitations for new public housing. This action effectively reneges on agreements between HUD and localities, PHAs and citizens, and PHAs and developers.

- HUD did not begin issuing regulations implementing the Omnibus Budget and Reconciliation Act of 1981 until May of 1982, thereby creating confusion in the administration of the public housing program.

Now let me turn to NAHRO's most critical concern--public housing operating subsidies. As you are, of course, aware, HUD has informed public housing agencies that they will receive only 75% of their 1981 operating subsidy level for fiscal year 1982. It is our assessment that the Administration's request for fiscal year 1983 is so woefully inadequate that we will again be placed in the same position next year, if only the requested level is made available by the Committee.

I realize that the members of this Committee are very familiar with the public housing program, but I would like to review some of the current facts with you to underscore the serious financial situation we are in. At present, this nation has already invested over $20 billion in approximately 1.2 million units of public housing which provide shelter for over 3.4 million people. Public housing tenants, with a median income of $3,313,definitely represent the truly needy of this nation. About 46% of the public housing units are occupied by elderly persons; 46% are occupied by female-headed households.

In recent years, the increase in public housing operating costs has far outstripped the increase in rental income. Between 1968 and 1978 operating costs increased over 300% while rental income increased by less than 50%. Tenants' incomes have been increasing an average of 5% per year, while the inflation rate has been increasing in the neighborhood of 10% and more, and utility costs have been rising annually in the range of 20% to 30%. In 1980, public housing agencies spent an estimated $750 million for energy costs alone. These costs have increased more than 400% over the last decade.

Federal operating subsidies have not kept pace with this growing discrepancy between income and operating costs. As you know, operating subsidies for public housing agencies are determined under a multi-variate formula known as the Performance Funding System (PFS). Recent studies completed on this system indicate that it does not accurately reflect need and that it is particularly inadequate for the larger urban areas. Aggravating this already inadequate system are continuous underestimates of economic cost factors.

For example, the Administration predicted the 1981 utility rate increase would be 11.4 percent. In fact, utilities rose at a rate of 22.7 percent in the first three quarters of 1981, representing an additional need of $73.7 million. The original HUD request for operating subsidies assumed a 11.3 percent increase in utility rates for 1982. HUD has since revised this figure to 15.2 percent though a recent NAHRO survey indicates the true figure will probably be 18.9 percent--necessitating an additional $33.7 million. The NAHRO survey also indicates the amount of supplemental funds needed to fully fund the PFS system in FY82 and provide for a utility adjustment for FY81 is $335 million.

Yet, despite this track record the Administration has submitted a request for fiscal year 1983 which contains an inflation rate increase of only 7.5 percent and a utility rate increase of only 9.3 percent.

Today, housing authorities across the nation that manage one-third of our public housing inventory, have depleted their reserves to below 20% of the maximum allowable. Some of these have no reserve funds at all. They have cut services and laid off staff to dangerously low levels. There is simply no way to absorb this persistent underfunding any longer.

HUD's estimate of $1.075 billion for 1983 does not take into account a number of funding cuts which will significantly impact upon our public housing programs. For example, cutbacks in federal income support to our tenants will cost public housing authorities millions of dollars even with increases in the percentage of the rental contribution. Additionally, many tenants who were employed under the CETA program, some of them providing security and other services to PHAs, have lost their jobs, hence their income and their ability to pay a significant portion of the money necessary to operate their units.

Many agencies also have relied upon programs of the Department of Health and Human Services to provide basic services to their tenants, such as day care, which enables many of their tenants to work. These programs are also targeted for reduction. Additionally, tenant incomes are certain to decline as various welfare assistance programs are reduced, thus decreasing the amount they can pay for rent and increasing their reliance upon basic services from the public housing agencies.

The reduction in tenant income eligibility for new tenants in assisted housing from 80% of median income to 50% will cost assisted housing operators approximately $1.6 billion in rental revenues by the end of fiscal year 1986, according to the Congressional Budget Office. Yet, the Administration offers no proposals to provide offsetting increases in public housing operating subsidies.

Mr. Chairman, I would like to outline for you the problems we have with the assumptions HUD used to arrive at its estimate of operating subsidy need for 1983. I would also like to offer NAHRO's estimate of what we feel the true need to be for FY83 operating subsidies.

The Administration's FY83 estimate includes:

- o An inflation rate increase of 7.5 percent;
- o A utility rate increase of only 9.3 percent, when economic forecasts predict the rate will be at least 11 percent: NAHRO supports an 11% projection
- o An increase in tenant income of 7 percent when (a) over 30 percent of public housing tenants are AFDC recipients whose income will not rise due to other federal program cuts; (b) unemployment is at a 40 year high and continually increasing; and (c) economic forecasts indicate that blue collar wages are expected to increase by only 7 percent. Therefore, we believe it is impossible for the net effect to be a 7 percent increase in income: NAHRO estimates the increase to be at a rate of 3.7%.
- o An increase in gross tenant rental income of $50 million due to the 1981 legislative amendments to increase the rent to income ratio. However, HUD assumes a 20% rental increase cap which has not been supported by the Congress, therefore NAHRO suggests the increase in income will be only $25 million.
- o A $100 million savings resulting from the inclusion of food stamps as income. This change has not been approved by Congress therefore NAHRO rejects this "savings."
- o A $172 million savings resulting from HUD imposed reductions to the allowable utilities expense level supposedly reflective of potential energy savings. These reductions are arbitrary and not supported by any rational basis or plan for energy conversation. We strongly support energy

conservation and are currently working with HUD and housing authorities to develop a system of determining reasonable utility consumption levels. Some changes might be implemented by 1983, but until they are defined, no estimates of savings can be made.

o A $23 million savings due to deregulation. While we also support maximum deregulation, we do not believe it will result in significant savings. Most of the deregulation is the result of the federal regulation duplicating a local or state requirement.

o Lastly, HUD anticipates $93.2 million to be contributed to PHAs by state and local governments. While state and local governments have and to some extent will continue to contribute to the public housing program, these contributions are in the form of capital improvements, supplemental and extra-budget support services. Almost uniformly, state and local governments have not contributed to the operating budgets of housing authorities. Reduced resources at the state and local level preclude any such contribution at this time and as a result should not be considered an offset to the federal obligation to operating subsidies.

NAHRO feels that $1.6 billion is the level of operating subsidy for FY83 which is responsible, maintains incentives for good management and energy conservation and which permits housing authorities to serve their low income tenants. Attached to this statement is a detailed description of this need and comparision with the Administration's request.

Mr. Chairman, the good news in this whole area of operating subsidies has to be the action taken by your Banking Committee to provide a new system of funding public housing operating assistance. The proposed three year funding would give public housing authorities desparately needed fiscal stability and lend a much needed element of predictability to their financial operations We at NAHRO whole-heartedly endorse this concept. NAHRO strongly urges this committee to provide contract and budget authority for three years at a level of at least $1.6 billion each year.

Mr. Chairman, NAHRO members are dedicated to a continuation of the commitment to housing and community development. We believe these programs can continue to work if adequately funded. With your support and funding at the levels we have requested, communities will be able to improve their neighborhoods and provide housing for low income persons.

Comparision of FY 1982 and FY1983 Estimates of PFS Need

(Dollars in millions)

		HUD's Current 1982 Estimate	NAHRO 1982 Estimate	HUD's 1983 Estimate	NAHRO 1983 Estimate
	PFS Base	1356.3	1423.8	1530.7	1638.0
(+)	Insurance Costs	0.0	17.0	0.0	17.0
(+)	Non PFS	47.0	47.0	45.0	47.0
(-)	Rent to 26%	-25.0	0.0	-50.0	- 25.0
(-)	New tanants rent 30%	- 8.0	0.0	-27.0	- 16.0
(-)	Elimination of negative rents	0.0	0.0	- 7.0	0.0
(-)	Inclusion of food stamps	0.0	0.0	-100.0	0.0
(-)	Reduced utility consumption	-103.6	0.0	-121.7	0.0
(-)	Utility reduction due to modernization	-40.0	0.0	-50.0	0.0
(-)	Revised inflation factor (7.5%)	-12.8	0.0	-28.8	- 28.8
(-)	Deregulation	-20.0	0.0	-23.0	0.0
(-)	State and local contributions	-41.6	0.0	-93.2	0.0
Subtotal:		1152.3	1487.8	1075.0	1632.2
Difference between total Requirements and Administration Budget		0.0	335.5	0.0	557.2
Total:		1152.3	1152.3	1075.0	1075.0

Senator D'AMATO. Is Mr. Banters here?

Mr. Banters is not here.

Melvin Primas, Jr., from Camden, N.J.

STATEMENT OF JOSEPH GUGGENHEIM, DIRECTOR OF HOUSING AND COMMUNITY DEVELOPMENT, CAMDEN, N.J.

Senator D'AMATO. I understand the mayor cannot be here inasmuch as yesterday he became the proud father of a baby; is that correct? We don't know whether the baby is a boy or a girl.

Mr. GUGGENHEIM. That is right.

Senator D'AMATO. And you are Mr. Joseph Guggenheim.

Mr. GUGGENHEIM. Thank you very much for the opportunity to present testimony today. I am the director of housing and community development for the city of Camden, N.J., and we have submitted some written testimony for the record.

Senator D'AMATO. It will be incorporated into the record as if read in its entirety. We look for your summary.

Mr. GUGGENHEIM. Thank you.

I just want to add for the subcommittee just one thing, to be able to providing funding for housing and community development programs to allow the mayors, to enable the mayors of the older and distressed cities in this country to revitalize their cities and to try to provide decent housing in communities, particularly for low-income persons.

Basically we are asking the subcommittee and the full Appropriations Committee to look at what you are doing based upon what the impact of the various programs are on the older and distressed cities in America. They are basically saying, "Give us the tools to work with and some of the resources to deal with the problems, and I think we can make some progress."

I am new to Camden and I was shocked when I came to that city and saw the data and toured some of the neighborhoods.

Senator D'AMATO. Where do you come from?

Mr. GUGGENHEIM. Originally from New York City and Detroit and Washington.

Senator D'AMATO. You came from Detroit?

Mr. GUGGENHEIM. That is right.

One-half of the population of Camden is supported by welfare or older people on inadequate pensions and social security. Over 20 percent of the population is currently estimated as unemployed. About 20 percent of the housing stock is abandoned and substandard and we have rows of vacant buildings and many of them not boarded up and many of them charred by fire and they are a hazard and menace to people living next door who don't now have any alternative.

SUBSTANDARD HOUSING

About one-third of our city's housing is substandard and about one-half of the rental housing is substandard. Through all of that, I was surprised to find some positive thinking by some of the citizens who are trying to improve the situation and a real williness to work to improve the community.

The mayor is trying to mobilize this willingness and to strike for change, but we basically need the tools and resources. In the housing areas we need programs to refinance rehabilitation of essentially our local house stock primarily for the low-income people who are living there.

And basically we see the administration and the congressional response so far would be to terminate basically the programs.

HOUSING AND COMMUNITY DEVELOPMENT AMENDMENTS OF 1982

Senator D'AMATO. Did you read S. 2226, the Housing and Community Development Amendments of 1982?

Mr. GUGGENHEIM. I have read some of the summaries of it.

Senator D'AMATO. Have you looked at some of the new coinsurance provisions? Did you look at raising of the limits for FHA on substantial and moderate rehabilitation in apartment units from $3,000 to $20,000?

Mr. GUGGENHEIM. Basically.

Senator D'AMATO. Have you read that?

Mr. GUGGENHEIM. No.

Senator D'AMATO. Are you familiar with that?

Mr. GUGGENHEIM. No.

Senator D'AMATO. Let me suggest to you that if you are going to make it a strictly dollars-and-cents issue, that you do yourself a disservice and you do this committee a disservice. I would think you should have some insight into some of the things that this committee is attempting to do in order to leverage a smaller amount of dollars so that we can get the private sector to come in and help in tandem with local governments. I have had some experience in this area as an administrator of the town of Hempstead, N.Y. S. 2226 has programs that are going to be of use by the Federal Government and should be of immeasurable use to the city of Camden. I suggest in the future you take a look at the legislation which you are talking about before you come in here with guns blazing.

Now go ahead. Your speech is more in the line for a political speech for a political campaign. I recognize that and don't think it is appropriate.

Mr. GUGGENHEIM. Well, what I wanted to say was our analysis shows that basically that it is very little if anything in terms of production programs for rehabilitation and new construction. And that basically the section 8 existing program is the basic program of any numbers and that is being used for conversions of existing subsidized units to another type of subsidy. And basically in terms of lower income housing stock we don't see any significant numbers of additional units that are being provided for low-income people.

And in the conditions, Senator, that our housing stock is in, we basically need programs that can meet the needs for additional units of low-income housing for our citizens where an existing housing program will not work.

INSUFFICIENT FUNDS IN SENATE BILL

We basically looked at the approach in the Senate and your recommending a new program of $300 million compared to the estimate of $1.3 billion in the House bill. The House H.R. 6296. I would like to submit for the record that the amount of money that is made available in the Senate bill on the unit basis is not enough to make an impact on the housing stock in Camden and that we urge that you look at the more the House version which is putting up something like $15,000 to $20,000 for rehabilitation cost per unit compared to the $5,000 or $6,000 that is provided in the Senate bill and compare to the $17,500 which seems to be the interest rates subsidy for middle-income persons in the bill for subsidizing mortgage interest rates to stimulate production.

So that basically we need a substantial rehabilitation program, Senator, in terms of what you are trying to do with the new program for production and the one that came out of the Senate authorizing committee as much as I have seen so far, does not provide the resources to enable us to deal with our housing stock in Camden. It is too little per unit and will not make a dent on it.

In addition to that, the administration's version of the bill would prohibit the city with entering into an agreement with the landlord to make sure the ultimate rents are kept in an affordable range. There is a provision which prohibits the city to say to the landlord to get a substantial subsidy of this program make sure the rents are within the affordable range for low- and moderate-income persons. We think that is a great difficulty in the Senate approach that we recommend that you take a second look at.

MORTGAGE INTEREST SUBSIDY PROGRAM

In terms of the mortgage interest subsidy program which the Senate is considering, we would hope that you would make sure that rehabilitation is included as well as new construction. Otherwise, we find the program would just be promoting a further outflow of population from the central cities.

In terms of other programs, we would support the full funding for the public housing operating subsidies. I think the Senate authorizing committee has taken a responsible approach there and we hope you will provide that level that was provided for in the authorizing bill.

Our housing authority in Camden has had to lay off a critically needed staff and may have to close down units because of the lack of adequate funding for operating subsidies.

We also think that the Senate should make an effort to keep the 312 program going because that is a tool that our mayor is using and reusing and other mayors are using to try to restimulate housing in the center city and talking about using the repayment of $69 million to continue that 312 program. And we hope that you would support that effort, because they think it is an opportunity to work and to target some of the critically needed dollars for housing rehabilitation. We also support the continuation of the 235 program for 4-percent loans to moderate-income persons and funding for the Neighborhood Reinvestment Corporation, particularly in comparison to the large amounts of money needed and we support the mortgage interest subsidy program to get the housing construction going.

We think these are modest income for the low- and modest-income programs which the mayors can use directly to work in their neighborhoods to get better housing. So we would hope you would support the kinds of tools that the mayors need to revitalize the cities in the relatively modest amounts that have been talked about. We think in relation to the need and in relation to past commitments of this Government, these are very small amounts in terms of what is really needed and we hope you would take some effort and we stand in the record of suggesting that we have to have programs that enable the cities to deal with needs and crises they are facing.

Thank you.

[The statement follows:]

STATEMENT OF MELVIN R. PRIMAS, JR., MAYOR, CAMDEN, N.J.

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, I APPRECIATE THE OPPORTUNITY TO APPEAR BEFORE YOU TODAY TO TESTIFY ON THE SUBJECT OF FISCAL YEAR 1983 APPROPRIATIONS FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND THE INDEPENDENT AGENCIES.

BECAUSE OF THE CRITICAL NATURE OF THE HOUSING PROBLEM IN THE CITY OF CAMDEN, I WILL FOCUS MY REMARKS ON THE HOUSING COMPONENTS OF THE APPROPRIATIONS BILL.

IN ANALYZING ANY LEGISLATION -- INCLUDING AN APPROPRIATIONS BILL-- MY FIRST QUESTION IS, "HOW WILL THIS LEGISLATION AFFECT MY CITY?"

THE ANSWER TO THAT QUESTION INVARIABLY DEPENDS ON THREE FACTORS:

- THE NATURE OF THE NATIONAL PROBLEM THAT THE LEGISLATION IS SUPPOSED TO ADDRESS;
- THE EXTENT AND NATURE OF THAT PROBLEM IN THE CITY OF CAMDEN; AND
- THE APPLICABILITY OR "WORKABILITY" OF THE PROPOSED LEGISLATIVE SOLUTION IN CAMDEN.

BASED ON THESE FACTORS, THE HOUSING AUTHORIZATION BILL AND THE RECOMMENDED APPROPRIATIONS BEING CONSIDERED BY THIS SUBCOMMITTEE WILL NOT HAVE A SIGNIFICANT POSITIVE IMPACT IN OLDER URBAN CENTERS LIKE CAMDEN UNLESS SOME MECHANISM CAN BE FOUND TO PROVIDE A REALISTIC LEVEL OF FUNDING ASSISTANCE FOR SUBSTANTIAL REHABILITATION OF EXISTING INNER-CITY, SINGLE-FAMILY HOUSING STOCK, AND FOR MORTGAGE ASSISTANCE TO LOW, MODERATE AND MIDDLE INCOME FAMILIES WHO WANT TO PURCHASE REHABILITATED SINGLE-FAMILY HOMES IN THE CENTRAL CITIES.

PROGRAMS DESIGNED TO STIMULATE THE SALE OF NEWLY-CONSTRUCTED HOMES WILL HAVE VERY LIMITED APPLICATION IN CITIES LIKE CAMDEN WHICH HAVE AN UNDERSUPPLY OF UNDEVELOPED RESIDENTIAL TRACTS AVAILABLE FOR NEW, SINGLE FAMILY HOME CONSTRUCTION, AND AN OVERSUPPLY OF VACANT, SUBSTANDARD HOUSES. AND I AM VERY CONCERNED ABOUT THIS, BECAUSE THE KEY TO CAMDEN'S ECONOMIC RECOVERY -- AND INDEED, THE KEY TO URBAN REVITALIZATION IN GENERAL -- IS THE IMPROVEMENT OF HOUSING

STOCK. CENTRAL CITIES LIKE CAMDEN CANNOT HOPE TO ENCOURAGE THE IN-MIGRATION OF WORKING TAXPAYERS UNLESS THERE IS AN ADEQUATE SUPPLY OF DECENT AND AFFORDABLE HOUSING AVAILABLE FOR RENT OR PURCHASE BY MODERATE TO MIDDLE INCOME WORKING FAMILIES.

FOR THIS REASON, IT IS MY SINCERE HOPE THAT THIS SUBCOMMITTEE WILL DETERMINE HOW TO BEST ADDRESS THIS NEED, WHETHER BY A SET-ASIDE FOR SUBSTANTIAL REHABILITATION OF EXISTING SINGLE-FAMILY HOUSING STOCK FOR RENTAL OR PURCHASE, OR BY SOME OTHER MEANS DEEMED TO BE APPROPRIATE BY THIS SUBCOMMITTEE.

IN ORDER FOR YOU TO UNDERSTAND THE NATURE AND DEPTH OF THE PROBLEM THAT I CONFRONT IN CAMDEN -- AND WHICH OTHER MAYORS OF MEDIUM TO LARGE-SIZE CITIES IN THE NORTHEAST AND MIDWEST MUST ALSO FACE -- PERMIT ME TO PROVIDE YOU WITH A FEW SIGNIFICANT STATISTICS:

- WE CURRENTLY HAVE 5,000 VACANT SINGLE-FAMILY AND DUPLEX UNITS IN CAMDEN, REPRESENTING NEARLY 20% OF ALL HOUSING STOCK IN THE CITY;
  - 90% OF THESE VACANT UNITS ARE DEPLORABLY SUBSTANDARD;
  - NEARLY ONE-HALF OF THESE 5,000 VACANT UNITS ARE PUBLICLY OWNED -- INCLUDING APPROXIMATELY 700 PROPERTIES WHICH ARE BACK ON THE INVENTORY OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AS A RESULT OF FORECLOSURES ON SECTION 235 MORTGAGES;
  - BECAUSE OF THE LACK OF ADEQUATE FUNDING FOR SUBSTANTIAL REHABILITATION OF SINGLE-FAMILY HOMES, NOT EVEN THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT HAS BEEN ABLE TO BRING THE HUD-OWNED INVENTORY OF SUBSTANDARD HOUSING IN CAMDEN UP TO CODE. INSTEAD, HUD ATTEMPTS TO SELL THE PROPERTIES "AS IS" TO SPECULATORS FOR "LEASED PURCHASE" BACK TO LOW AND MODERATE INCOME RESIDENTS, WITHOUT MAKING ANY CORRECTION OF THE ORIGINAL SUBSTANDARD HOUSING CONDITIONS;
  - SUBSTANDARD HOUSING REPRESENTS ONE-THIRD OF ALL EXISTING HOUSING IN THE CITY OF CAMDEN, AND ALMOST ONE-HALF OF ALL AVAILABLE RENTAL HOUSING IN THE CITY.

MR. CHAIRMAN, IF YOU WERE TO ASK ME HOW THIS SUBCOMMITTEE COULD BEST HELP CITIES LIKE CAMDEN TO RESOLVE THEIR SERIOUS HOUSING PROBLEMS, I WOULD MAKE THE FOLLOWING RECOMMENDATIONS RELATIVE TO FISCAL YEAR 1983:

AT THE MINIMUM, I WOULD URGE LEGISLATIVE REVISIONS THAT WOULD ALLOW THIS SUBCOMMITTEE TO APPROPRIATE HIGHER LEVELS OF FUNDING THAN CURRENTLY AUTHORIZED IN THE SENATE BANKING COMMITTEE AUTHORIZATION BILL FOR MULTI-FAMILY PRODUCTION AND REHABILITATION GRANTS. IN ADDITION I WOULD RECOMEND THE SUBCOMMITTEE TO FULLY APPROPRIATE THE PROPOSED $5.0 BILLION IN BUDGET AUTHORITY PROPOSED FOR SINGLE FAMILY MORTGAGE INTEREST SUBSIDIES IN S.2226 SUBJECT TO THE FOLLOWING LEGISLATIVE CHANGE

(1) MORTGAGE INTEREST SUBSIDIES FOR SUBSTANTIALLY REHABILITATED SINGLE-FAMILY HOMES AND CONDOMINIUM/COOPERATIVE UNITS IN NEIGHBORHOOD TARGET AREAS. THE FISCAL YEAR 1983-1986 SENATE AUTHORIZATION BILL FOR SINGLE-FAMILY MORTGAGE INTEREST SUBSIDIES, S. 2226, DEFINES ELIGIBLE HOME OWNERSHIP STRUCTURES SO AS TO INCLUDE SUBSTANTIALLY REHABILITATED CONDOMINIUMS. I UNDERSTAND THAT SENATOR HEINZ HAS OFFERED AN AMENDMENT TO THAT BILL WHICH WOULD INCLUDE SUBSTANTIALLY REHABILITATED SINGLE-FAMILY HOMES AS ELIGIBLE STRUCTURES AS WELL. THIS CHANGE WOULD GREATLY ASSIST CITIES LIKE CAMDEN WITH SUBSTANTIAL REHABILITATION HOUSING NEEDS. $5.0 BILLION IS CURRENTLY AUTHORIZED FOR THIS NEW MORTGAGE INTEREST PROGRAM IN S. 2226, AND WITH SUCH A LEGISLATIVE REVISION, CAMDEN WOULD, FOR THE FIRST TIME, BE ABLE TO TAP THIS TYPE OF FUNDING INCENTIVE FOR NEW PRIVATE HOME OWNERSHIP AND REHABILITATION PROGRAMS. WITHOUT IT, CAMDEN WOULD BE DEPRIVED OF A VALUABLE TOOL FOR PRIVATE INVESTMENT INCENTIVES IN CENTRAL CITY LOCATIONS.

(2) WITH REGARD TO MULTI-FAMILY RENTAL PRODUCTION AND REHABILITATION GRANTS, CURRENT SENATE AUTHORIZATION LEVELS FOR FISCAL YEAR 1983 ARE $300 MILLION, COMPARED TO $1.3 BILLION IN THE HOUSE AND $9.4 BILLION FOR CURRENT-YEAR FUNDING OF SECTION 8 SUBSTANTIAL REHABILITATION AND CONSTRUCTION BUDGET AUTHORITY. ALTHOUGH NEW FISCAL REALITILS OF THE 1980'S WILL REQUIRE HEAVY CUTS IN THE SECTION 8 PROGRAM, I WOULD URGE THE SUBCOMMITTEE TO CONSIDER INCREASED 1983 FUNDING FOR SUBSTANTIAL REHABILITATION BLOCK GRANTS TO ASSURE A BETTER BALANCED NATIONAL COMMITMENT TO RENTAL AS WELL AS HOME OWNERSHIP HOUSING PRODUCTION. MOREOVER, I WOULD SUGGEST

A LEGISLATIVE REVISION THAT ALLOWS CITIES LIKE CAMDEN TO BE ELIGIBLE FOR DIRECT BLOCK GRANT ALLOCATIONS. CURRENT SENATE AUTHORIZATION LANGUAGE IN THE FISCAL YEAR 1983 SENATE BANKING COMMITTEE MARK-UP BILL LIMITS DIRECT BLOCK GRANT ALLOCATIONS TO CITIES OF OVER 100,000. CAMDEN'S POPULATION IS CURRENTLY APPROXIMATELY 80,000. NEEDLESS TO SAY, THIS PROVISION WOULD DEPRIVE JURISDICTIONS LIKE CAMDEN FROM DIRECT ACCESS TO THIS VALUABLE HOUSING REHABILITATION TOOL.

(3) WITH REGARD TO SECTION 312 SUBSTANTIAL REHABILITATION LOANS, THESE CAN GREATLY ASSIST CITIES LIKE CAMDEN, BUT ONLY IF THE PROGRAM IS ADEQUATELY FUNDED. THE SENATE AUTHORIZATION BILL WOULD ELIMINATE THIS PROGRAM IN FISCAL YEAR 1983. COMPARED TO A $3.5 BILLION SUBSIDY FOR NEW SINGLE FAMILY HOMES, THE ELIMINATION OF SUBSTANTIAL REHABILITATION LOANS IS A WOEFULLY INADEQUATE NATIONAL RESPONSE TO HOUSING REHABILITATION NEEDS ESPECIALLY FOR OLDER, VACANT HOUSING STOCK REQUIRING SUBSTANTIAL REHABILITATION. (WITH THE HEINZ AMENDMENT, THE LUGAR BILL'S PROPOSED BUDGET AUTHORITY OF 5.0 BILLION IN PRIVATE MORTGAGE INTEREST REDUCTION PAYMENTS WOULD HELP RESPOND TO THIS NEED, BUT STILL DOES NOT RESPOND TO THE NEED FOR INCREASING THE SUPPLY OF MULIT-FAMILY RENTAL AND HOME OWNERSHIP HOUSING SHELTERS FOR LOWER-INCOME HOUSEHOLDS.

IN ADDITION, I WOULD URGE A "SET-ASIDE" PROVISION FOR DISTRESSED AREAS WITH SEVERELY DETERIORATED HOUSING STOCK, ALONG THE FOLLOWING LINES:

(1) A CERTAIN SHARE -- PERHAPS TEN TO TWENTY PERCENT OF THE NATIONAL FUNDING LEVEL FOR HOME OWNERSHIP INTEREST SUBSIDIES -- SHOULD BE RESERVED FOR USE IN DISTRESSED LOCALITIES.

THIS SET-ASIDE SHOULD BE ABLE TO PROVIDE MORTGAGE INTEREST SUBSIDIES FOR BOTH NEW AND SUBSTANTIALLY REHABILITATED SINGLE-FAMILY HOMES, AS WELL AS SUBSTANTIALLY REHABILITATED CONDOMINIUM UNITS IN NEIGHBORHOOD TARGET AREAS. SUCH A SET-ASIDE WOULD REPRESENT AN ADDITIONAL $500 TO $1.0 BILLION IN FUNDING FOR THESE LOCALITIES, IF THE SENATE ADOPTS A $5.0 BILLION AUTHORIZATION.

(2) SIMILAR SET-ASIDE PROVISIONS SHOULD BE ADOPTED FOR MULTI-FAMILY RENTAL PRODUCTION AND REHABILITATION GRANTS.

THANK YOU AGAIN, MR. CHAIRMAN, FOR THE OPPORTUNITY TO PROVIDE BOTH COMMENTS AND RECOMMENDATIONS ON THIS VERY IMPORTANT LEGISLATION.

STATEMENT OF FRED NAPOLITANO, PRESIDENT, NATIONAL ASSOCIATION OF HOME BUILDERS

Senator D'AMATO. Mr. Fred Napolitano, president, National Association of Home Builders.

If you would summarize your statement, it will be included in the record as if read in its entirety.

Mr. NAPOLITANO. As you said, I am president of the National Association of Home Builders and we represent about 115,000 members.

With me today are Bob Bannister, our senior staff vice president for governmental affairs, and Jim Schuyler, staff vice president and legislative counsel.

Let me first express my appreciation to you and to Chairman Garn and the rest of the subcommittee for your help in the supplemental appropriation bill that just got approved regarding the funding for the stimulus program.

As you know, this program fiscal year 1982 funding was provided by the Senate Appropriations Committee on May 18 and as an interest reduction plan designed to produce housing and to help lead the Nation out of the recession we are in.

I am not going to repeat all of the statistics which describe how severe the housing depression is. I think you probably heard that and I am sure you are well aware of, but they are in our full text and we do itemize all the things that are happening to this industry today.

Unless and until mortgage interest rates are reduced to an affordable level, our industry will not show any signs of recovery. I am sure the subcommittee is aware that in the past seven recession periods it has been the housing industry that has led the overall economy out of the recession. I might add this one isn't going to be any different, whether you finally get down to it, unless housing leads the way out, you are not going to see this economy improve anywhere down the line.

HOUSING STIMULUS PROGRAM

Mr. Chairman, the speedy passage of the initial appropriation of $1 billion for housing stimulus program is the first step toward moving the American economy forward. Approximately 80,000 new housing units will be produced by this program. The full stimulus program will produce approximately 450,000 new homes and would generate 700,000 new jobs. I urge funding of the full interest reduction housing program as the immediate stimulus needed to lead the economy out of recession.

Mr. Chairman, I think also this can be done in this building year if it is done quickly and that is what we are after; get it done now so we can get them people back to work regarding multifamily affordable housing in this Nation. The national vacancy rate is 5.3 percent, down from 5.6 percent in the third quarter of 1980 and much less in many larger urban markets.

I would urge you to fund a new multifamily production program authorized by the Banking Committee as a means of alleviating the severe rental housing shortage. However, funded at a level of $300 million to new multifamily production program will not begin to address a rental housing crisis of that scope.

GINNIE MAE TANDEM PROGRAM

In addition, I urge that you accept the provision of the urgent supplemental appropriations bill which provides essential funding of $1 billion for the Ginnie Mae tandem program. I commend the accommodation in the urgent supplemental appropriations bill for the financing adjustment factor provided there is no requirement of a disproportionate equity contribution by developers.

A workable FAF will move 100-percent section 8 projects through the pipeline. However, in recent years HUD has encouraged developers to apply for funding for partially assisted projects to achieve economic integration in a fair geographic distribution.

Developers have invested substantial amounts of money in present construction fees for these proposed partially assisted multifamily projects and there is no turning back from these investments.

There is no other way to finance these units.

Mr. Chairman, the section 202 direct loan rental production program for the elderly and handicapped should continue to be funded, at least at the fiscal year 1982 level of 17,000 units with the interest set at 9¼ percent.

I will not belabor the issue of the importance of the FHA insurance, VA guarantee, and the Ginnie Mae mortgage-backed security program. I think others before me talked about that in length and you know our position on that. But obviously this is the worst time to restrict Government credit for housing, given the conditions of the housing and mortgage finance market today.

SUMMATION

Mr. Chairman, I will try to sum it up very quickly. Those are the main things we are concerned with. There is more in depth in our full text and let me close by saying we are at the mercy of this Congress and the administration at this critical time and what is needed is passage and funding for the interest reduction housing stimulus program to its full extent.

The subcommittee had recognized the need for affirmative effective national commitment to housing. And you should be proud of the work done by your staff with our staff in trying to get some of these achieved. We look forward to working with you and the staff and I will be happy to answer any questions you might have.

[The statement follows:]

STATEMENT OF FRED NAPOLITANO ON BEHALF OF THE NATIONAL ASSOCIATION OF HOME BUILDERS

My name is Fred J. Napolitano and I am a homebuilder from Virginia Beach, Virginia. I am testifying today on behalf of the more than 114,000 members of the National Association of Home Builders (NAHB). Mr. Chairman, since November of 1981 NAHB has sufferred a loss of over 9,000 members. NAHB is a trade association of the nation's homebuilding industry, of which I am President. Accompanying me today are Robert D Bannister, Senior Staff Vice President for Governmental Affairs and Jim Schuyler, Staff Vice President and Legislative Counsel.

Mr. Chairman, I first want to express my appreciation to the Chairman for his leadership which led to the funding of the housing stimulus program in the FY'82 Urgent Supplemental Appropriations bill. As you know, this program, for which FY'82 funding was provided by the Senate Appropriations Committee on May 18, is an interest reduction plan designed to produce housing and help to lead the economy out of recession.

I need not repeat the statistics which describe the severity of this housing depression.

HOUSING PRODUCTION

- New housing production in 1981 totalled 1.1 million units as against an annual need for new homes that has been estimated conservatively at 1.8 million units throughout the 1980s. Last year was the worst housing production year since 1946.
- 1982 could finish as the worst post-war production year yet. NAHB's optimistic forecast for this year holds annual production to about one million. Housing starts in April fell to a seasonally adjusted annual rate of 881,000, down 32 percent from a year earlier, and down more than 58 percent from the peak of over 2 million in 1978. April was the ninth consecutive month that housing starts were below the one million annual level.
- May is the 41st month of recession in housing. The previous record was set during the Eisenhower Administration when the housing recession lasted 27 months.
- Total multifamily housing production in 1981 (379,000) declined 13.9 percent from 1980 (440,000) and has declined 35.4 percent from the previous peak year of 1978 (578,000).
- Multifamily starts as a percentage of total starts declined to 35 percent in 1981 and has declined by 44.5 percent from the peak years of 1972-1973.
- The rate of multifamily housing production for the first four months of 1982 (91,700) is 43.5 percent less than for the first four months of 1978 (162,200).

- The latest data shows that median asking rent for multifamily units has declined 3.1 percent from $356 in the second quarter of 1981 to $345 in the third quarter of 1981.

NEW HOME SALES

- 1981 was the worst year for new home sales since the Census Bureau began collecting statistics in 1963. Only 437,000 new homes were sold, compared to 545,000 homes in 1980 and more than 800,000 in 1977 and 1978.

- Since March 1981, annual new home sales rates have been under the 500,000 level. In March of this year, the annual sales rate of new homes was 334,000. This is the lowest monthly rate since the Census Bureau began keeping monthly figures.

- Actual sales in March nationwide were 31,000 new homes -- roughly the monthly number of new homes that were sold in the West alone during 1978 and 1979. In all of the Southern states, only 7,000 new homes were actually sold in February. Only 6,000 new homes were sold in the Northeast and North Central states combined.

INTEREST RATES

- Conventional mortgage interest rates now average above 17 percent. Mortgage rates at such high levels price the vast majority of potential buyers out of the market.

- Interest rates normally fall rapidly and decisively during recission, but in this downturn they have declined slowly and have remained in an historically high range. Analysts forecast that mortgage rates are not likely to drop below 15 percent this year, thereby killing off any chances for a housing recovery in 1982. The consensus is that home sales will remain at depression levels until mortgage rates drop to the 12 percent range, which by historical standards still represents an extraordinarily high cost of home financing.

- By reducing interest rates from 16 percent to 12 percent, 4.6 million additional families could qualify for a $65,000 mortgage. At 12 percent interest rates, more than 22 percent of the nation's families have the $35,000 income needed to qualify for a modest $65,000 mortgage. At 16 percent rates, fewer than 14 percent have the $44,000 income needed to qualify for the same mortgage amount.

UNEMPLOYMENT

- Unemployment in the construction trades in April was 19.4 percent or 1,011,000 unemployed workers, accounting for 10 pecent of the total unemployed work force. Another 200,000 skilled craftsmen could lose their jobs over the next several months.

- An estimated 200,000 self-employed people in construction-related businesses have either shut down or sharply curtailed their operations in the housing industry. Self-employed people are not counted in the Labor Department's unemployment statistics.

- Bankruptcies are up 51 percent for construction firms and 65 percent for subcontractors.

- Rising joblessness toward levels not experienced since the 1930s continues to feed the federal deficit. The Congressional Budget Office estimates that every 1 percent increase in unemployment costs the Treasury $25 billion -- $19 billion in lost revenue and $6 billion in new expenditures to pay for unemployment programs.

Mr. Chairman, these facts show with no uncertainty the critically depressed state of our industry. Unless and until mortgage interest rates are reduced to affordable levels, our industry will not show any signs of recovery. I am sure this Subcommittee is aware that in the past seven recessionary periods it has been the housing industry that has led the overall economy out of recession.

HOUSING STIMULUS

Mr. Chairman, the speedy passage of the initial appropriation of $1 billion for the housing stimulus program is the first step toward moving the American economy forward. Approximately 80,000 new housing units will be produced by this program. The full stimulus program would produce approximately 450,000 new homes and would generate 700,000 new jobs. I urge funding of the full interest reduction housing program as the immediate stimulus needed to lead lead the economy out of recession.

MULTIFAMILY HOUSING

Mr. Chairman, affordable rental housing has become a scarce commodity in this nation. The national vacancy rate is 5.3 percent, down from 5.6 percent in the third quarter of 1980, and much less in many large urban markets. I would urge you to fund a new multifamily production program authorized by the Banking Committee as a means of alleviating the severe rental housing shortage. However, funded at a level of $300 million, the new multifamily production program will not begin to address a rental housing crisis of national scope. I urge the funding of multifamily rental housing production at a significantly higher level that will begin to alleviate the rental shortage.

In addition, I urge that you accept the provision in the urgent supplemental appropriations bill which provides essential funding of $1 billion for the GNMA tandem program. Each GNMA unit commitment will lead to a multifamily housing start. I commend the accommodation in the urgent supplemental appropriations bill for the Financing Adjustment Factor provided there is no requirement of a disproportionate equity contribution by the developers. A workable FAF will move 100 percent Section 8 projects through the pipeline. However, in recent years HUD has encouraged developers to apply for funding for partially assisted projects to achieve economic integration and a fair geographic distribution. Developers have invested substantial amounts of money in pre-construction fees for these proposed partially assisted multifamily projects - and there is no turning back for these investments. This $1 billion level of funding for GNMA tandem would finance at least 20,000 units of partially assisted rental housing. There is no other way to finance these units.

Mr. Chairman, the Section 202 direct loan rental production program for the elderly and handicapped should continue to be funded at the FY'82 level of 17,000 units with the interest set at 9 1/4 percent. Section 202 projects benefit needy elderly and handicapped renters and are developed by non profit sponsors. NAHB believes that the development of Section 202 projects could be made more efficient by opening up development opportunities to profit motivated sponsors whose experience will save valuable time and money. Likewise, Section 202 housing production should not require non profit sponsors to initially go through a competitive bidding process to select a developer. The Administration's proposal to require open bidding will add greatly to the costs of projects in the form of preliminary development of plans. This cost will be passed on to the housing consumer and taxpayer.

FHA/GNMA CREDIT PROGRAMS

Mr. Chairman, I will not belabor the issue of the importance of the FHA insurance, VA-guarantee and GNMA mortgage-backed securities programs. Since the creation of FHA in 1934, more than 16 million homes have been purchased with low downpayment mortgages insured by the federal government at no cost to the public. Obviously, this is the worst time to restrict government credit for housing given the conditions of the housing and mortgage finance market. FHA and VA represent the only sources of low-downpayment, fixed-rate long-term mortgages available today and throughout the housing cycle. GNMA is essential to provide the capital necessary to finance these loans. We should certainly not turn away from the proven GNMA program in today's environment, while we continue to work for an acceptable conventional mortgage-backed securities program. Therefore, we strongly endorse the maximum FHA authority of $41 billion and GNMA authority of $68.25 billion. In addition, we would oppose any proposal to restrict FHA activity to first-time homebuyers or inner city residents. Such proposals are not in the interest of maintaining the actuarially sound and successful FHA program that we will continue to need in the future.

CONCLUSION

Mr. Chairman, we in the housing industry are truly at the mercy of Congress and the Administration at this critical time. What is needed is passage and funding for the interest reduction housing stimulus program to its full extent. This Subcommittee has recognized the need for an affirmative, effective national commitment to housing. You should be proud of the outstanding work of this Subcomittee's staff - both majority and minority. We look forward to working with you and with your staff to solve the critical problems of housing. I am most grateful for the opportunity to appear before you today, and would be pleased to answer any questions you may have.

Senator D'AMATO. Thank you very much, Fred.

Let me thank you for your participation, not only here today, but for the work of your staff in helping develop the interest subsidy bill. This bill has been passed by this committee, not only by the subcommittee, but by the entire Appropriations Committee and is the subject of a discussion which I will be going to in a very few minutes, because there is a threat, not only of a veto, but a threat of a number of amendments and a filibuster by one of my colleagues on the Senate floor.

There are certain people who seem to me to be somewhat doctrinaire in their view of the economy and believe that such a subsidy is inflationary and expensive.

I don't share that view. I share the view that this program will provide housing for people at affordable rates and put people to work in the housing industry. So I would suggest to you that you use all of your efforts to moderate the opposition that might exist so that some people in the Congress, and in the Senate in particular, can understand how this moderate proposal can help with the extremely grave situation of unemployment and high interest rates.

We thank you for your participation and your testimony here today. But, more importantly, we thank you for your previous work with this committee and other committees.

Mr. NAPOLITANO. I couldn't have summed it up any better, and I will be overlooking or listening to the debate that is going on.

PREPARED STATEMENTS

Senator D'AMATO. Some people who wanted to testify before the subcommittee were unable to appear either yesterday or today. Therefore, I would ask unanimous consent that the testimony of these individuals be included in the record at this point.

[The statements follow:]

STATEMENT OF ROBBI J. SAVAGE, EXECUTIVE DIRECTOR, ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

My name is Robbi J. Savage. I am Executive Director and Secretary/Treasurer of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA).

The Association is an independent, nonpartisan organization of State Administrators of the water quality program. ASIWPCA members represent the State organizations which, on a daily basis, implement the Clean Water Act and frequently other environmental legislation as well. All 50 States, 6 Interstate Agencies, 3 Territories, and the District of Columbia are represented within the Association.

The members of ASIWPCA wish to compliment this Committee for its efforts in securing action on the Fiscal Year 1982 appropriation for the Clean Water Program. We also commend the Congress for acting responsibly in passing the Clean Water Act Amendments of 1981. These amendments are an important milestone in the State, National and Local efforts to achieve and maintain clean water. For too long, the clean water program has been encumbered by excessive bureaucracy, with new rules, regulations, requirements, policies and guidance being continuously established, revised and revoked. Given the already complex nature of the program, the constant changing of the rules which governed it has resulted in a seemingly never-ending process of readjustment. This often slowed rather than enhanced progress toward acheiving the Clean Water Act's goals. Our Association supported the Administration and Congressional efforts to reduce program oversight, improve program management and focus on water quality and we were pleased that the amendments enacted were, by and large, responsive to State concerns.

The States have consistently endorsed the Federal/State partnership reflected in the Clean Water Act. In passing the 1972 law, Congress determined that the Federal government and the States would administer the program on a complementary basis: States would manage the Federal program through delegation while EPA would establish minimum ground rules and fill in where States did not assume responsibility. Interstate Agencies would address regional needs that could not be adequately met by the Federal government or individual States. This approach is, of course, wholly consistent with the Administration's policy on Federalism.

With the numerous 1984 deadlines in the Act approaching, it is more important than ever that the States can be confident of sustained and adequate Federal financial support as they move to assume increased responsibilities in this partnership. ASIWPCA therefore urges this Committee to approve the President's budget request of $2.4 Billion for construction of Publicly Owned Treatment Works (POTW's). We further urge that the appropriation for Section 106, State Management Grants, be maintained at its 1982 level of $51.2 Million.

The next four years will mark a significant transition for the nation's clean water program. Three factors are essential to assure that this transition is smooth and orderly--that it promotes attainment of the highest possible water quality and the maximum return on the investment made. These factors are STABILITY, EFFICIENCY AND FLEXIBILITY.

STABILITY

ASIWPCA has repeatedly stressed the importance of stable funding. In light of the States' limited ability to increase their spending for environmental programs, further cutbacks in Federal support will inevitably curtail needed programs or result in States returning delegated responsibilities to the Environmental Protection Agency.

SECTION 106

In no program has the need for continuity been greater than in the Section 106, State Management Grants. The activities funded by this Section form the core of the States' water programs, providing for:

1) the issuance and enforcement of NPDES permits;
2) the industrial pretreatment program;
3) Statewide monitoring program to determine permit requirements and compliance with water quality standards; and
4) operation of an emergency response program for accidental spills.

In addition to specifically delegated responsibilities, State program activities often include:

1) a Statewide O&M program to assure that municipal wastewater treatment facilities are properly operated, maintained, and managed;
2) an operator training facility to train municipal wastewater treatment plant operators;
3) technical assistance and plant evaluations for municipal wastewater treatment facilities;
4) effluent sampling and evaluations to improve compliance with NPDES permits; and
5) review of plans and specifications for municipal and non-municipal wastewater treatment facilities to assure that they can meet the State treatment requirements.

The Federal investment in Section 106 grants to the States is one of the best bargains the Federal government has ever received. The State programs have dedicated, knowledgeable and trained staffs that can carry out the delegated Federal responsibilities much more efficiently and cheaply than Federal employees who are located further away and are not nearly as knowledgeable about or experienced with specific State problems.

Although 106 program support has been relatively constant over the past decade, Federal program requirements have increased significantly, particularly in regard to the control of toxic pollutants. Fortunately, as State programs matured and expanded to meet the requirements of the Act, State funding increased substantially in the decade of the 70's. However, persistent inflation and recent static funding have forced States to curtail existing Federally mandated activities. This is becoming more critical as State appropriations for the Federal program are declining because of State budget cuts.

Funding under Section 106 cannot be viewed independently of the Federal interest under the Act in clean water. The programs for which States use these funds are those necessary to implement the Act's requirements. The very existence of State agreements to continue voluntary administration of these programs depends on reasonable Federal requirements and adequate Federal funding. If the program is allowed to deteriorate, experienced personnel will be lost and the necessary technical support will not be maintained. EPA would be hard pressed to administer the programs if States felt compelled to return delegated functions to the Agency. In fact, the basic capability to administer the national policies reflected in the Act will be diminished or eliminated.

The Administration's proposed 1983 budget calls for a 20 percent reduction in Section 106 State Management Grants. At the same time, the budget projects an increase in the number of States with delegated NPDES responsibility from thirty-three to forty. This projection is unrealistic because a sustained level of 106 funding is absolutely critical to States' continued willingness or ability to administer the Federal permit program under NPDES and otherwise comply with the Federal mandates.

This does not mean that more cannot be accomplished with less. Costs of increased requirements can be offset by streamlining regulations, by careful attention to water quality needs and by limiting EPA involvement to program audits and technical assistance. States accept their fair share of cuts in the effort to restore confidence in Federal expenditures. But in point of fact, the water program has been reduced drastically from FY81 levels. Further cuts directed toward State management assistance are consistent with neither the goals and objectives of the Act nor with Federalism.

In light of the huge investment in the protection of our nation's waters that has been made under the Clean Water Act's programs, it is imperative that the States continue to be provided adequate resources through Section 106 to manage the water quality control programs properly and to ensure that this investment is protected. We are entering a new phase of toxic pollutant control which more than justifies the existing funding level.

Funding should not be diverted from the Construction Grants Program for this purpose; instead sufficient funding should be continued through Section 106 to maintain a strong and viable water quality control program. There seems to be a growing trend in the Administration to rely on Title II funds to cover a number of Clean Water Act programs unrelated to the purposes of that Title. We cannot emphasize too strongly that States need adequate management funds under both Section 106 and Section 205 if they are to carry out a comprehensive water quality improvement program.

The concerns of the State of Georgia with regard to the necessity for adequate 106 funding are reflected in the attached document prepared by J. Leonard Ledbetter, Director, Environmental Protection Division, Georgia Department of Natural Resources.

ASIWPCA PRIORITY RECOMMENDATION

SECTION 106 APPROPRIATIONS

Section 106 of the Clean Water Act should be reauthorized by Congress at no less than $75 Million annually for FY83-87 for implementation by the States of the Clean Water Act. Although State management needs are significantly greater, a minimum of $51.2 Million should be appropriated for FY1983 to enable State and Interstate Agencies to carry out the Federal water quality programs.

CONSTRUCTION GRANTS

As ASIWPCA has repeatedly testified in previous appearances before this Committee, the Title II Construction Grants Program, more than any other part of the Act, has suffered because of fluctuating Federal support.

This program, which many view as a centerpiece of the clean water program, grew out of the recognition that inadequate municipal sewage treatment was a major cause of the nation's water pollution. Through the 1972 law, Congress embarked on a major revision of the Construction Grants Program to assist local governments in building badly needed wastewater collection and treatment facilities. The Act required that all Publicly Owned Treatment Works (POTW's) provide secondary (biological) treatment or a higher level if necessary to meet water quality standards. Since local finances were constrained and most waters run through several States, a Federal program was seen as the fastest and most assured way of attaining proper treatment levels. This cost-sharing program, though only one part of the total water quality management program, was a central and indispensable part of the strategy for achieving the Clean Water Act objectives.

As of January, 1982, $34 Billion has been appropriated by Congress under the program. Of the $33 Billion obligated by US EPA to communities for over 19,000 projects, $20 Billion has been spent. Over 3,500 plants have been constructed and are operational. Generally they tend to be the small plants which take less time to construct. As treatment plants have come on line, substantial reductions in pollutant loads and improvements in water quality have been achieved. The States' ability to maintain water quality, as municipal facility wasteloads have substantially increased due to greater reliance on central systems and population and industrial growth, may be an even more meaningful indication of progress and effective management. Most States report good municipal compliance rates for plants constructed under the Act.

In 1981, ASIWPCA supported the reduction in this program's funding from its previously authorized level of $5.0 Billion per year to the recently authorized level of $2.4 Billion per year. Our support was contingent upon two basic conditions:

1) that the program would actually be funded at the newly authorized level beginning in FY1982, and
2) that the allotment formula for distributing the funds to the States would be fair and equitable to the States.

As you well know, there has been a protracted delay in the 1982 appropriation. Because over 34 States had obligated all of their previously available funds to local governments, progress in the Construction Grants Program has essentially been halted in well over half the country. This loss of momentum comes just at the time when States were getting this extremely complex program under control--when obligation rates were high and the project "pipeline" operating smoothly. Even when the 1982 funds are released, the demand for grants in terms of projects "ready to go" far exceeds the $2.4 Billion available.

EPA has estimated that the average project in this program requires seven to nine years from initiation of planning to initiation of operation. Projects to be funded with Fiscal Year 1982 appropriations, on the average, began planning in 1976 to 1977. Unfortunately, the lag in program funding creates problems even if funds are restored. A one year deferral of a project can delay completion one to four years. In some cases, facility plans may become outdated as project construction is put on hold. Deferral also increases project costs due to inflation; in some cases these inflationary costs exceed the funding available for the specific project, or necessitate the deferral of other projects lower on the priority list.

The basic issue here is one of commitment--the commitment made by the Administration and the Congress when the Construction Grants Reform Legislation was adopted last year. This commitment is to the fifty States and thousands of communities that have planned for these projects, raised their local matching share, and made their own commitments of time, energy and in some cases money for project design or construction, under an assumption that this program will not be halted abruptly and that the rules of the game embodied in the 1981 Amendments will not change overnight.

ASIWPCA PRIORITY RECOMMENDATION

APPROPRIATIONS

> The Association recommends full appropriations at the authorized level of $2.4 Billion for the Construction Grants Program for Fiscal Year 1983 and for each subsequent year through FY1987.

SECTION 205(g) CONSTRUCTION GRANT MANAGEMENT SUPPORT

With the support of Section 205(g) funding, States have vastly improved their capability to manage the Construction Grant Program with delegation. The benefits are readily apparent: administration is cheaper, management is more efficient and effective, and better treatment solutions result.

The 1981 Amendments increased the amount which may be reserved by the States (under section 205(g)) to administer the Construction Grants Program from the previous level of 2% of the State's share of the authorization to a new level of 4% of the State's share of the authorization. However, it should be recalled that the authorization has been decreased from a level of $5.0 Billion per year to $2.4 Billion per year. Therefore, the actual amount of funds available to the States is not increased by this provision, but is in fact decreased slightly. At the same time, decreased Federal involvement, as mandated in the 1981 Amendments, may increase State workloads.

While it may ultimately require fewer resources to administer the program, the States do not envision any immediate staffing reductions to be appropriate. The majority of the workload during the coming years will be related to ongoing projects which are already in the grants process. §205(g) fiscal management must focus on the long term. Construction Grants Management activities do not stop with a phase down or sunset of the program, but continue until projects are through construction and closed out, which can take up to 5 years from the date of grant award. States, therefore, must "bank" some 205(g) funds to carry them through periods when new Federal funds are not forthcoming. For example, the current delay of the Construction Grant appropriation 8 months into the Fiscal Year reinforces the States' conviction that a reserve must be maintained to assure stable program management.

The support under 205(g) provided in the 1981 Amendments is absolutely critical if we are to achieve full delegation. I caution that this goal is some distance away. Federal involvement, through US EPA and the Corps of Engineers, continues at a high level with States responsible for managing 49% of the Construction Grants Program under delegation in FY81. States are willing to accept complete delegation, but many must improve their current capabilities to do so. This can only occur if stability and adequate funding are assured. According to State estimates, a funding level of approximately $100 Million (i.e. that provided under the Amendments) will be necessary for full delegation.

It is important to keep in mind that States voluntarily assumed management of Federal responsibilities with the understanding that 205(g) funding would be adequate to carry out the State/EPA Agreements. This partnership is jeopardized if the necessary support is not continued. Although the Act provided flexibility to use 205(g) funding for other than Construction Grants Management activities, States have mixed reactions to this provision depending on their fiscal situation. In all cases, however, States strongly maintain that the integrity of the basic water program grant must be maintained; 205(g) State Management Assistance for construction grants was not intended to replace 106 as the mainstay of the water program or 205(j) Local Planning funds.

ASIWPCA PRIORITY RECOMMENDATION

SECTION 205(g) FUNDING

Prompt appropriation of the $2.4 Billion for the Construction Grants Program will minimize disruption of State administrative activities funded through Section 205(g). However, EPA and Congress should recognize that although the percentage of the State's allotment has increased, there has not been an actual increase in funding available to the State to administer the Construction Grants Program. Therefore, the States should not be expected to perform non-Construction Grants activities with the Section 205(g) funds, nor should these funds be expected to supplant other State water pollution control grants provided under Section 106 of the Act.

EFFICIENCY

While ASIWPCA agrees with the Federal government's desire to reduce expenditures, we remain commited to the maintenance of a vigorous and effective water pollution control program. Naturally, our members are well aware of the interrelationships between program implementation and money. If the State/Federal partnership established under the Act is to be maintained, the Congress and EPA must recognize the linkage between Federal requirements and Federal financial commitment. Statutory deadlines, levels of pollutant reduction and rates of progress expected must be consistent with the funds available.

In recent months, much emphasis has been placed on the necessity for reforming regulatory programs. ASIWPCA welcomes this initiative, which accords well with our long-standing support for streamlining the clean water program to assure efficient and cost-effective management. We would urge the Congress and the Administration to establish a strong consultation role for the States in the detailed development of legislative and regulatory proposals designed to achieve this streamlining. This consultation should begin at once.

Federalism is undoubtedly the coming trend in the 80's. One of the advantages of such a policy is the increased efficiency that results from having program managers in States and communities making decisions based on a firm grasp of specific circumstances. As I noted in my discussion of Section 106, States have built cadres of trained, knowledgeable personnel. If Federalism is to work in practice, States must be empowered to rely on their staffs--to become the principal managers with full responsibility for delegated programs. In turn, they must accept accountability. This will require EPA to develop improved measures of performance that will focus on relevant environmental quality improvements, rather than tabulations of procedural activities.

States should have the primary responsibility for identifying critical needs and the authority to shape their programs to meet the identified needs. The appropriate role of the Federal government is to provide technical assistance and program oversight. When a State assumes responsibility for the operation of a program or has adopted a standard which has been approved by the Federal government, EPA review of individual State actions should be replaced by periodic program audits. EPA's role should be limited to program oversight to the extent of assuring the protection of public health and the compatibility of standards on interstate streams. In addition, the Agency should strengthen its research program to provide the foundation for establishment of criteria, standards, and other water quality program decisions. In particular, ASIWPCA would like to see the Agency focus its research attention on the effects of toxic pollutants in the water, the long-term effects of pollutant exposure and efforts to address environmental improvements and innovative program analysis and management.

NPDES DELEGATION

The National Pollutant Discharge Elimination System (NPDES) is the Clean Water Act's major mechanism for controlling industrial and municipal point sources of pollution. NPDES activities include monitoring, planning, permit issuance, compliance and enforcement. NPDES activities are not limited to those States with approved (commonly referred to as delegated) programs. Non-NPDES States assist EPA in administering the programs, in many cases assuming major responsibility.

State analysis indicates the NPDES program is in serious jeopardy unless significant reforms are instituted. The present situation wherein States are faced with wholesale slippage in effluent guideline issuance, short statutory deadlines, over-burdensome requirements, and funding shortfalls must be addressed. These problems are bringing the program to a virtual halt, undermining the credibility and viability of the Act. While states support the objectives of the NPDES program, they have become increasingly concerned over the manner in which those objectives have been pursued.

Many States' permit programs, which preceded the Act, were essentially equivalent in results. The major effect of the Act, as implemented, was to increase administrative requirements, program complexity, and resource needs. This diversion from environmental priorities often yielded no water quality improvements but was believed necessary to assure national uniformity of substance and procedure. That may have been appropriate for some situations, but circumstances have changed. The philosophy was to regulate to the "lowest possible denominator." The result, in many cases, was to replace State programs with an unsatisfactory substitute.

EPA's further tendency to remain involved in program operations, regardless of NPDES delegation, has led to needless and counter-productive duplication, resource expenditures, program delay, and strained Federal/State relations. The Administration has indicated the intention to minimize such problems administratively. However, legislative action will also be in order.

Once an NPDES activity is in place, the level of effort must be maintained. All too often this fact is forgotten as more responsibility is placed on State governments. To cite just one example, the toxic pollutant control effort--even in moderately industrial States--will be technically complex and costly. In such a situation, and in the absence of additional resources, States may be compelled to cut existing NPDES activities.

States are exploring alternative financial arrangements. Some have permit or "user" fees, others are considering them. The Administration, as part of its rationale for reducing 106 funds, contends that such fees can be used to offset these cuts. But only a few States have a fee system in place which provides anything approaching that level of support. In those States, program management has been predicated on the combined Federal and fee support and will undoubtedly suffer if the Federal component is reduced. While the concept that the user pays appears reasonable, it should be recognized that small dischargers--which can least afford to pay large fees--often take a disproportionate amount of state officials' time. Finally, it should be noted that institution of fee systems by States will take several years, particularly since legislative approval will generally be required.

States welcome the Administration's continued support for delegation of environmental programs. However, the outlook for sustained and further NPDES delegation is bleak. As resources become further constrained, States must unavoidably consider the return of NPDES delegated functions to EPA.

ASIWPCA PRIORITY RECOMMENDATIONS

NPDES DELEGATION

EPA must implement an effective "delegation" of the NPDES responsibility to the States as has been done for Construction

Grants Management Assistance under Section 205(g). To emphasize this approach, a new subsection must be added to Section 402 of the Act.

DELEGATION

EPA must cease costly duplication of State program activity in NPDES delegation oversight and, instead, audit State program results. EPA enforcement must be initiated only where a State does not act or Federal assistance is requested by a State. Section 402 must be revised to allow partial assumption by States of the NPDES program pursuant to joint Federal/State agreement.

STREAMLINED NPDES PROCEDURES

The NPDES regulations must be streamlined to expedite the process and minimize costs to the State, industry, and local communities. Modifications should specifically address:

- repeal of Consolidated Permit Regulations;
- increased State flexibility;
- expanded use of General Permits;
- streamlined compliance notices;
- applicability to Federal facilities;
- permit format; and
- public notice requirements.

FLEXIBILITY

In a time of limited resources, the establishment of priorities becomes even more critical. While ASIWPCA members remain firmly commited to the goals of the Clean Water Act, they have recognized for some time that specific circumstances in their States necessitate differing emphases under various provisions of the law.

As resources become even more constrained, States must have broad flexibility to 1) focus on priority water problems and 2) administer their program in the most streamlined, cost-effective manner possible. This flexibility is reasonable because the water quality, types of dischargers and State and local resources vary tremendously among the States, and must be factored into consideration in developing strategies for managing an effective pollution control program.

Unfortunately, some aspects of the Act and of EPA's regulations preclude appropriate State discretion. EPA frequently tends to set out mandatory planning and other requirements which are not always relevant to States or localities. Whereas results are important, the process and procedures for getting there require flexibility. Unnecessary time and resources are expended on analysis and justification when the outcome is reasonably certain or a simpler approach could accomplish the same objective. Examples include:

- mandatory analysis of land application, water conservation, recreational opportunities, Infiltration/Inflow;
- value engineering and bidability/constructability review;
- architectural and engineering review of contracts less than $100,000.

ASIWPCA PRIORITY RECOMMENDATION

Delegated States must be provided more freedom and flexibility in determinations and approvals relating to Clean Water Act programs. Except as may be required by the State, all judgments need not be fully and completely documented. States should be encouraged to develop alternative grant processes and procedures to reduce cost or expedite decisions--these alternate procedures must be allowed if project quality is comparable.

ADVANCED WASTEWATER TREATMENT (AWT)

Advanced Wastewater Treatment review is a classic example of good intentions gone awry because Federal management has not been sensitive to program limitations. ASIWPCA recognizes that the additional costs required by Advanced Treatment warrant careful scrutiny. States strongly support the need to minimize treatment costs, but have reservations about the procedures used.

Retroactive application of review requirements has caused undue hardship on communities through no fault of their own. The standards setting process, established by the 1981 Amendments, should be an adequate control. Required, detailed and prolonged project review at the Federal level has caused substantial project delays. Cost savings rarely exceed the inflationary costs of delay. Lamentably, the issue in Advanced Wastewater Treatment review has often turned on the question of Federal cost "exposure" rather than questions of water quality. A tendency to bury projects in paperwork fails to address two key issues:

1) treatment more stringent than secondary is necessary in some circumstances for water quality; and
2) State agencies generally have the best information and understanding to adequately justify and resolve the issue.

ASIWPCA PRIORITY RECOMMENDATION

Advanced Treatment review should be conducted at the State, rather than the Federal level, so that States, which are knowledgeable about specific circumstances, can expedite review. Approval authority should be delegated to US EPA Regions or to States under Section 205(g). ASIWPCA looks forward to EPA's revision of the Water Quality Standards process which we hope will accomodate evaluation of the propriety of Advanced Treatment. We anticipate working closely with the Agency in developing this process.

SECTION 205(j)

The recent addition of an additional set-aside under Section 205(j) for areawide planning again raises the issue of Federalism. Planning is fundamental to a cost-effective pollution control program. There is a continuing need, despite the lack of 208 funding, and States are commited to continuing such activities. ASIWPCA is concerned that the Act give States the flexibility to focus planning where it is more needed in the program in the simplest manner possible. We have extensive provisions in Sections 201, 208, 303, and now 205. We need less bureaucratic planning requirements, not more. This approach takes the program away from the integration the Association believes desirable. The Association has taken the position that planning provisions should be consolidated by integrating Section 208 into Section 303 of the Act. It should be funded through Section 106 just as other State water program activities.

ASIWPCA PRIORITY RECOMMENDATION

Funding under Section 205(j) should be strictly at each State's option. As with the State Administration grants under Section 205(g), funds available under Section 205(j) should not be used to offset reductions in other State water pollution control grants provided under Section 106 of the Act.

The ASIWPCA members are ready to work closely with the Congress and the Environmental Protection Agency to ensure that the nation receives the maximum possible improvement and protection of its water despite economic constraints. We again urge this Committee to act promptly in appropriating $2.4 Billion for FY1983 Construction Grants and $51.2 Million for 106 State Management Grants.

The Association of State and Interstate Water Pollution Control Administrators is ready to answer any questions which the Subcommittee may have.

Grants for State Water Pollution Control Programs
(Section 106)
by the
Environmental Protection Division
Georgia Department of Natural Resources

For the past nine years the Federal funds provided under Section 106 and State appropriations of about an equal amount have provided the basic budget support for the State of Georgia water pollution control program efforts. During this period the State has assumed all of the water pollution control program responsibilities provided in the Federal Act that can be delegated to the States, namely (1) the issuance and enforcement of NPDES permits including the recent addition of responsibility for Federal facilities; (2) the industrial pretreatment program; (3) Statewide monitoring program to determine compliance with water quality standards; and, (4) operation of an emergency response program for accidental spills of materials into the waters of the State. In addition to the specifically delegated responsibilities, the Georgia program activities also include: (1) a Statewide O&M program to assure that municipal wastewater treatment facilities are properly operated, maintained and managed; (2) an operator training facility to train municipal wastewater treatment plant operations; (3) providing technical assistance and plant evaluations for municipal wastewater treatment facilities; (4) effluent sampling and evaluations to improve compliance with NPDES permits; and (5) review of plans and specifications for municipal and non-municipal wastewater treatment facilities to assure that they can meet the State treatment requirements.

As an example of the essential program activities, during FY 1982, the State of Georgia water pollution control program, with Section 106 funds accounting for about half of the budget, plans to complete the following activities:

1. Issue or re-issue about 300 NPDES permits.
2. Enforce compliance with the NPDES permit requirements for 101 major municipal and 52 major non-municipal dischargers and to maintain surveillance on an additional 1800 NPDES permittees.
3. Complete detailed compliance sampling inspections at 101 major municipal NPDES permittees and 52 major non-municipal NPDES permittees.
4. Establish and enforce local pretreatment programs in 30 local communities; review and approve five local pretreatment programs that are developed and submitted by the local communities.
5. Complete detailed technical evaluations at 10 municipal wastewater treatment facilities to assist with improved plant operation.
6. Train about 1000 municipal wastewater treatment plant operators.
7. Operate and maintain a statewide network of 126 stations to document the chemical and biological quality of the State's surface water and to compile and publish the Data.
8. Respond to more than 100 emergency incidents where toxic or undesirable materials are spilled or discharged into the waters of the State.

Since FY 1980 there has been a minimal increase in the amount of Section 106 Federal funds allocated to the Georgia program. During this period, with inflation and other cost increases running at about 12 - 15 percent per year we have basically been experiencing a yearly reduction in Federal funding.

If the Federal funding for Section 106 grants is reduced without a commensurate reduction in Federal program requirements we must seriously consider which of the delegated Federal program responsibilities must be returned to the Environmental Protection Agency. We seriously doubt that the State of Georgia is prepared to appropriate State funds to carry out Federal water pollution control responsibilities.

In light of the huge investments in the protection of our Nations's waters that has been made through the Construction Grants Program, it is imperative that the States continue to be provided adequate resources through Section 106 to manage the water quality control programs properly and to insure that this investment is protected. As stated previously, funding should not be diverted from the Construction Grants Program for this purpose; instead sufficient funding should be continued through Section 106 to maintain a strong and viable water quality control program.

Significant improvements have been realized in Georgia as a result of the combined effect of construction of new municipal and industrial wastewater treatment facilities and improved operation and maintenance of existing facilities. Through its Section 106 and 205 (g) grants, the Georgia Environmental Protection Division has administered water quality control programs resulting in the implementation of needed improvements across the State. Once construction is completed, compliance monitoring, technical assistance, operator training, facility permitting and enforcement must be carried out through the Section 106 programs, as must the water quality monitoring activities. Over the past 10 years, the Georgia Environmental Protection Division has documented the maintenance of existing good quality or improvements in water quality at 33 of its 37 major water quality trend monitoring stations.

The Federal funds being provided for Section 106 grants to the States is one of the best bargains the Federal government has ever received. The State programs have dedicated, knowledgeable and trained staffs that can carry out the delegated Federal responsibilities much more efficiently and cheaper than Federal employees that are located farther away and not nearly as knowledgeable or experienced with State-type problems.

State Appropriations		Percent of Program Budget
FY 79 -	$ 938,721	39.4
80 -	1,109,533	34.0
81 -	1,174,135	41.0
82 -	1,457,574	48.0
83 -	1,815,504 (Anticipated)	

Federal Funds		Percent of Program Budget
FY 79 0	$ 1,446,847	60.6
80 -	1,519,000 Allocation	
	635,759 Supplemental	
	2,154,759 Total	66.0
81 -	1,600,000 Allocation	
	91,473 Supplemental	
	1,691,473 Total	59.0
82	1,519,000 Allocation	
	81,000 Supplemental	
	1,600,000	52.0
83 - Unknown		

The tabulation shows that during the past two years the State appropriations have increased whereas the Federal funds have decreased. This does not include the Federal funds provided under Section 205 (g) for operation of the delegated Construction Grants Program.

EPA has advised that the Administration's FY 1983 budget indicated a 20% reduction in Federal funds for State Water Pollution Control Programs (Section 106). This would indicate a reduction of about $320,000 in the Federal funds for the State of Georgia program. A budget cut of this magnitude would mean a reduction in force of about 13 professional staff members along with reductions in travel and other operating costs which would have a very significant adverse effect on the State of Georgia water pollution control program efforts during Fy 1983. Efforts to obtain and maintain compliance with NPDES wastewater dischargers permits at the major facilities through effluent sampling would be greatly reduced; efforts to operate and maintain our Statewide ambient monitoring network would be greatly reduced; efforts to obtain and maintain compliance with NPDES permits by the minor dischargers through facility inspections would reduced, and development and implementation of our industrial pretreatment program would be greatly slowed down. In addition, plan and specification reviews, response to citizen complaints and other program activities would be reduced or terminated.

Summary

Federal funding to the States under Section 106 sould be continued at the FY 1982 levels. The huge investment in the quality of the Nation's water, by both the public and private sectors, must continue to be protected. We understand the need to reduce Federal expenditures; however, any reduction in Section 106 funding must be accompanied by a commensurate reduction in Federal requirements. It must be realized that a reduction fo 20% in Federal funding for FY 1983 would have a significant adverse effect on the State of Georgia water pollution control program. Professional staff would have to be terminated and several vital program activities would have to re recuced and portions of some of the Federal responsibilities delegated to the State program may have to be returned to EPA.

STATEMENT OF THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

Introduction

This testimony is to express the concerns of the membership of the National Environmental Training Association (NETA) with the proposed reduction in financial support to environmental training.

The NETA is a nonprofit Association supported by member dues. The membership of NETA include individuals employed by academic institutions, water and wastewater treatment facilities, governmental agencies at all levels, and the private sector (consulting firms, etc.).

Although NETA is concerned with all sectors of environmental training, this testimony will concentrate on water quality and wastewater treatment. The urgency for training and the necessity for training applies equally to the other areas of environmental training (air, solid waste, drinking water, toxic and hazardous wastes, noise, etc.).

Problem

National defense begins with protection of public health through maintenance of an acceptable environmental quality. The control of traditional pollutants as well as the increasing emergence of exotic environmental pollutants such as toxic and hazardous wastes necessitates an ever more complex technology. The transition from primary wastewater treatment to secondary treatment represented a quantum leap in technology for which the work force was ill prepared. Despite the tremendous investment of public tax revenues in the construction of highly technical wastewater treatment facilities, a 1981 GAO study reported that over 87% of the privately owned treatment plants operate improperly and that 31% are in serious violation of NPDES permit limitations. In many cases, permit limits were exceeded by 100 percent (1000 percent in some cases) often for periods exceeding one year.

A report in 1980 by Hegg et al identified the top three factors responsible for poor plant performance as:

1. Failure to apply treatment concepts;
2. Failure to understand treatment concepts;
3. Improper advice and guidance from advisors.

The International Joint Commission on the Assessment of Human Health Effects of Great Lakes Water Quality reported that "optional functioning" of wastewater treatment plants will require improved plant operator training.

The need for training is further substantiated when the demand and supply of qualified and competent environmental work force is examined. At present construction rates, an estimated 3000 additional environmental workers will be needed each year as projected by the draft copy of the 1990's Construction Grants Strategy Report. A 1980 Report by the American Academy of Environmental Engineers demonstrated how critical the problem of an inadequate work force is. The Academy's report showed a reduction in the number of graduates with an environmental degree and a reduction in the number of advanced degree candidates.

The ramifications are far reaching, not only is there be a very limited supply of advanced degree graduates to continue the development of an environmental work force, but the limited supply of existing workers results in aggressive competition for the most competent. Because salary ranges are greater in the private sector and the Federal government, the states, counties, and local governments must settle for individuals less prepared to effectively deal with environmental challenges. As the 1982 GAO study of 140 water systems revealed there are a lack of funds and a lack of qualified personnel at state and local levels.

The result is that state and local governments will have an even greater need for environmental training to develop a competent work force. Few will be able to take a responsible position as they attempt to deal with inflation and significant reductions in all areas of Federal financial assistance. The necessity for training is intensified when staff and budget are extremely limited. Under these conditions employers such as local governments cannot afford to take the time and money to correct mistakes or to increase enforcement activities.

The supply of competent operating staff for treatment facilities is equally overtaxed. As previously noted, the two top factors responsible for poor plant performance are failure to understand and apply treatment concepts. Clearly there is a significant demand for developing the competency and skills necessary to properly operate and maintain these sophisticated, highly technical treatment facilities effectively.

In these times of severe economic constraints the emphasis on training is good business and represents the positive side of enforcement. Enforcement without assistance is counterproductive. The offer of training in concert with enforcement promotes cooperation and compliance.

Availability of Training

Tremendous advances have been made in the field of environmental training and technical assistance. The U.S. EPA established extensive support services for technical assistance and training to include technical guidance, direct training and financial support for establishing local environmental training programs. The U.S. EPA National Training and Operational Technology Center (NTOTC) was established to dessiminate this information, make training resources available, and coordinate training resources to minimize duplication of effort and maximize limited training funds. This responsible position has however deteriorated. Since 1973, 72% of the expenditures for O and M training have been rescinded and the staff in this area reduced to less than one in each of 10 regional sections and a handful at the Washington Office. The NTOTC has been completely eliminated.

With the gudance and assistance of U.S. EPA, State governments, academic institutions and associations established training programs for the environmental work force. Few programs were, however, established as self-sufficient programs. Many depend wholly or, in part, on training resources such as manuals and financial assistance from the U.S. EPA. Although much has been accomplished as the GAO report reflects, much more needs to be done.

Successes

Everyone professes to acknowledge training as a necessary and critical entity. Private industry has long recognized that training is a cost effective activity. How cost effective? The U.S. EPA Office of State and Local Manpower Development Branch published a report in 1973 which stated that every dollar invested in training results in a savings of $91.

The training and development of a competent operating staff can reduce operating expenses in the following ways:

.Proper operation and maintenance of equipment reduces costly repairs and replacement as well as reducing energy (electrical) costs.

.Skills in computation, testing, and analysis reduce overdosage of costly chemicals.

.Proper operation and maintenance improve compliance thereby reducing costly enforcement action at all levels of government as well as reducing the need for reaction to enforcement orders.

The end result is a more cost effective pollution abatement effort.

Training can often represent the difference between compliance and noncompliance. The January 1981 edition of the journal "Water/Engineering and Management" reported on a wastewater treatment facility in Durham, N.C. which consistently exceeded the NPDES permit limitations. After attending an EPA workshop on "Activated Sludge Process Control" sponsored and instructed by the NTOTC, the facility's compliance with effluent requirements improved from 61% to 90% of the time. Consider the cost savings resulting from a reduction in enforcement, compliance monitoring, and efforts expended to react to enforcement actions.

Support

The need for training is recognized and supported by all sectors of the country. The Water Pollution Control Federation (WPCF) in 1979 published the article "Operation and Maintenance of Water Pollution Control Facilities: A White Paper" which included forty references to the need for and recommendations for training. The National Office of NETA has received numerous copies of letters stating concern and support for training ranging from the Personnel Advancement Committee of the N.Y. WPCF to the "grass roots" membership of NETA.

Other national organizations such as the American Clean Water Association, the National Demonstration Water Project, the Association of Metropolitan Sewerage Agencies, the American Academy of Environmental Engineers, the National Academy of Sciences have expressed support for training and development of an environmental work force.

Recommendations

The NETA supports fiscal responsibility and reduction in federal spending, but opposes indiscriminate elimination of all environmental training programs. The Association advocates state self-sufficiency. The sudden and complete elimination of all federal support for environmental training however was too abrupt. A more orderly transition is necessary to enable state's to prepare for this enormous responsibility. Through EPA-State agreements, state training plans and strategies should be established which will gradually reduce federal assistance and increase local funding over a defined period of time resulting in a state training program which is self-sustaining. Continuation of federal support to environmental training resources such as the NTOTC will provide the direction and technical assistance to achieve state self-sufficiency.

In order to accomplish this the Sections of PL92500 which provide for training and which expire in September 1982 must be reauthorized. Congress must reauthorize Sections 104(g), 106, 109b, and 112 of PL92500 as the first step in demonstrating a commitment to environmental training.

The most logical source of funding for this activity is the Construction Grants Program. It is illogical to construct more wastewater treatment facilities when we cannot operate the plants we have. This approach to funding will provide financial resources without increasing the EPA budget allocation and will minimize the inflationary reduction of the unencumbered construction grant funds. Specifically, Section 205(g) (1) of the Clean Water Act of 1977 (P.O. 95217) should be amended to permit the Administrator of the U.S. EPA to award grants to the states for the purpose of carrying out work force development programs provided for by Sections 104(g), 106, 109, and 112 of PL92-500.

Serious consideration should also be given to mandating training as has been done in the Resource Conservation and Recovery Act (ReCRA) which mandates that an employer train employees handling toxic and hazardous wastes. Examples of this type of approach might include a requirement that an established percentage of a construction grant must be allocated to training. This concept is different than the present requirement that the engineering firm remian on-site and operate a newly constructed treatment facility for a prescribed period of time. Another approach is to require that a fixed percentage of the operating budget for the treatment facility be allocated to training. In some was the owners and users of treatment facilities must be impressed with the necessity for developing and maintaining a competent operating staff.

The ReCRA legislation does mandate the training of the industrial worker but no attention has been directed to the training of the state and local regulatory and monitoring staff. Federal resources are necessary to develop the capabilities for recognizing, identifying, and managing hazardous wastes.

Although precise levels of financial support are difficult to recommend without more indepth knowledge of budget details, the following allocations are recommended for consideration:

Section	Purpose	Amount	
PL94580	Regulatory Staff Training & Development	$2,000,000	Sub- Tota A
PL92500			
104(g) (1)	Operator and Instructor Training	1,000,000	
104(g) (3) (A)	Professional (graduate) Training	600,000	
104(g) (3) (B)	Research Fellowships	500,000	
104(g) (3) (C)	Direct Training	750,000	
109-112	Undergraduate Training	650,000	
109-112	Curriculum Development		
	National Training and Operational Technology Center (NTOTC)	1,000,000	
	Sub-Total B	$5,000,000	
Total Environmental Work Force Development (Sub-Total A&B)		$7,000,000	

As stated previously, the NETA is equally concerned with financial and technical assistance to the other areas of environmental training. Congress is strongly encouraged to review the specific issues in this testimony and apply the concepts to the environmental training for drinking water, solid waste, toxic materials and hazardous wastes, air quality, noise, etc.

The NETA is thankful for the opportunity to provide this testimony and respectfully request that Congress consider our concerns and assume a responsible position in developing a competent and qualified environmental work force.

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Report by the Comptroller of the United States; Costly Wastewater Treatment Plants Fail to Perform as Expected. November 14, 1980, CED - 81-9 United States Accounting Office.

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The International Joint Commission's Committee on the Assessment of Human Health Effects of Great Lakes Water Quality, 1980.

LETTER FROM BILL L. ATCHLEY, PRESIDENT, CLEMSON UNIVERSITY

April 29, 1982

The Honorable Ernest F. Hollings
The United States Senate
Senate Office Building
Washington, DC 20510

Dear Senator Hollings:

In the February 1982 publication of the budget from the Office of Management and Budget, Executive Office of the President, Page 25, it states relative to the Environmental Protection Agency budget, "All extramural research in the water quality program can be eliminated, shifting all future activities to in-house R&D labs." It further cuts drinking water research programs, the hazardous waste program, and the pesticide research program.

If this is implemented, it will have a disasterous and devastating effect on environmental research. In the opinion of most environmentalists, for almost a decade the research carried out by the Environmental Protection Agency Laboratories - with the possible single exception of the Athens, Georgia, Lab - has been mediocre.

It is apparent that if the Federal government is as poorly run as the Reagan Administration feels, and if the Environmental Protection Agency is among the poorer run organizations as the Reagan Administration apparently feels, then it is insane to allow EPA to do all their own research without having an independent check. If all the research is done internally at the Environmental Protection Agency, then who is to question their work? They will be doing the research, writing their own regulations, and enforcing them, and I and my colleagues do not feel that this is in the best interest of society, industry, or any of the other parties concerned.

I would like to ask that you consider correcting this inequity. The Environmental Protection Agency should have increased funding for research in these vital areas, but in any case, a relatively large percentage of the research they do should be done outside the Federal government as a control on quality and to represent the public interest.

Sincerely,

Bill

Bill L. Atchley
President

STATEMENT OF THE AMERICAN CONSULTING ENGINEERS COUNCIL

The American Consulting Engineers Council is an organization of approximately 3,800 private engineering firms engaged in a wide range of disciplines to provide professional engineering services to private clients, local governments, state and federal agencies. ACEC member firms provide engineering services directly to many of the agencies under the jurisdiction of this subcommittee, as well as to grantees under assistance programs of those agencies. Such engineering services range from the planning and design of Veteran's Administration hospitals, performance of flood prevention studies and fire safety building evaluations for the Federal Emergency Management Administration, the planning and design of community facilities under HUD Community Development Block Grants, the design of NASA launch facilities, to the planning, design and construction management of wastewater treatment systems under the EPA Construction Grants Program.

For many years, ACEC and its member firms have been concerned about the waste and inefficiency, overlapping regulations and resulting delays which occur in virtually all direct federal procurement and federal grant assistance programs. This is true particularly of many programs under the jurisdiction of the HUD and Independent Agencies Appropriations Subcommittee. ACEC, therefore, has enthusiastically supported the efforts of President Reagan and his Administration to reduce waste and inefficiency in federal programs, to cut to more realistic levels federal expenditures as a means of curbing national inflation and to deregulate federal requirements on state and local governments to meet federal mandates and requirements.

In this context, we would like to offer the following comments on the fiscal year 1983 appropriation request by the Administration as it pertains to the programs under the jurisdiction of the HUD and Independent Agencies Subcommittee.

At its Annual Meeting in Las Vegas, Nevada on May 6, 1981, the American Consulting Engineers Council unanimously passed a resolution supporting the Administration's Economic Recovery Plan including federal spending reductions, personal and corporate tax relief, grant and regulatory reform and increased reliance on private enterprise. The resolution also supported Congressional and Administration efforts to foster further economy, efficiency and integrity in the federal government. Based on this resolution, ACEC has assisted and supported the Administration and Congress to achieve these objectives. This policy was reaffirmed at the 1982 Annual Meeting in Philadelphia. As such, the American Consulting Engineers Council supports the budget requests submitted by the Administration and urges the Subcommittee on HUD and Independent Agencies to approve the funding levels for Fiscal Year 1983 as requested by the Administration.

More particularly, ACEC would like to comment on the Appropriation request for the Environmental Protection Agency for Fiscal Year 1983 as it relates to the Construction Grants Wastewater Treatment Programs. ACEC supports the Administration's intention to fund this program at a level of $2.4 billion for the next four years beginning in FY'82. ACEC actively supported reform of the Construction Grants Program by amendment of the Clean Water Act signed by President Reagan in December, 1981.

Reform of the program, however, is not enough. Realization of clean water goals through actual construction of wastewater treatment facilities and management of the program by the states depends on a steady predictable commitment of federal funds. Since 1980, the resouces allocated to the Construction Grants Program have been reduced by $4.4 billion; $2.6 billion by reduced authorizations and $1.8 billion in rescission of 1980 and 1981 appropriations. Moreover, the 1982 Fiscal Year appropriations supported by the Administration, the Congress, the private sector and state and local governments, has yet to be approved.

The impact of this sequence is that more than forty states have obligated all their project dollars. All fifty states have received $0 in program management and other funds tied to the construction grant appropriation. States have accepted the commitment and the obligations of delegation and are paying their project review staff wtih state funds. Local governments have passed bond issues, acquired rights of way, prepared plans and specifications. The construction industry has been forced to lay off skilled workers, as have engineering design firms.

More than 1000 projects are ready to go for final design and construction awaiting Congressional approval of FY'82 and FY'83 funding. EPA has completed grant regulations to implement the Clean Water Act amendments and revised the procurement system to eliminate many of the delays in grant and contract review. All that remains is Congressional approval of H.R. 5922 and the FY'83 Appropriations.

The 1981 Clean Water Amendments defederalized, deregulated and reduced overall federal expenditures to carry on the job of cleaning up the Nation's waters. The states and local governments and the wastewater industry supported those reforms and are prepared to continue the effort.

All that is necessary is for the federal partner to keep its pledge to appropriate its share. ACEC urges the Appropriations Committee and the Congress to take quick action to fulfill that commitment.

STATEMENT OF TROY D. BRIDGES, PAST PRESIDENT, SOUTH CAROLINA SCIENCE COUNCIL

I am writing as a concerned citizen, a parent, a teacher of chemistry and the immediate past president of the South Carolina Science Council.

I have just completed a study of the Testimony to Committee on Labor and Human Resources of the U.S. Senate in regard to 1983 Education Component of the National Science Foundation, presented by Sarah E. Klein, President of the National Science Teacher Association.

I was aware of dwindling numbers of science and mathematics teachers but was unaware of the seriousness of the problem on the National Level as revealed by the above stated report.

As one who has benefited tremendously from the NSF Programs I am confident that the investment in these programs yielded dividends far beyond the initial funding.

I attended the first NSF Program at The American University in Washington, D.C. in 1956 "Recent Advances in Chemistry and Physics", following my release from the Army in January of 1956. I accepted a position as teacher of General Science at Fairfax High School, beginning in September of that same year. After taking NSF sponsored courses in Chemistry and Physics at American University I taught Chemistry and Physics in addition to General Science. In 1960 I attended an NSF Institute in Chemistry at the University of Minnesota followed by an Institute in Physics at the University of Virginia in 1961. I returned to my home state of North Carolina in 1962 teaching Chemistry at East Mecklenburg High School in Charlotte, NC. In 1966 I accepted a position as Chemistry Teacher at Spartanburg High School, Spartanburg, SC. Since 1970, I have been teaching the Advanced Placement Chemistry Course. After teaching the A.P. Chem. Course one year I attended NSF Institute for A.P. Teachers at Hope College in Holland Michigan. During the period of 1970 -1982 I have seen three of my A.P. Chemistry Students chosen among the top 40 winners of the Westinghouse National Science Talent Search - many others have been chosen among the 300 honors group including Erik Kragas a senior this year at Spartanburg High School.

I am confident that the NSF programs have provided me with background and expertise that has enabled me to contribute meaningfully in directing the work of these young people and many others.

Further, I believe the funding for science and mathematics preparation and updating of teachers could concieveably aid in improving the entire school curriculum. The interchange of ideas between participants from many areas is an excellent means of propagating effective teaching and problem solving techniques.

I have written these comments hoping that a positive personal experience would be useful and to encourage you to attend the Senate Subcommittee hearings regarding this testimony on Monday April 19, 1982.

STATEMENT OF REPRESENTATIVE DONALD J. MITCHELL OF NEW YORK

I am grateful for the privilege of submitting my statement in support of an appropriation to implement legislation, H.R. 6030, Defense Authorization, to provide an adequate civil defense system for our nation.

It is my belief one of the most pressing and unmet needs facing our nation is for an adequate civil defense program -- one which is responsive to existing threats and prepares us for future challenges.

I am supporting President Reagan's program which will give us, for the first time in this nuclear era, the protection we must be assured as we face our idealogical adversaries who lack our commitment for the pursuit of peace. Simply put, my goal is to help to balance the strategic scales but, if there should be a war, to help insure the survival of our nation. We have no program today. It's time we did.

This program evolved over an extended period of time after protracted study by civil defense experts who have earned respect and a national reputation for their work in this area. It is a product of serious, well-intentioned people who share a concern about our present, have learned from lessons of the past and are determined to prepare us to live in peace. It is a refinement and an improvement of the program recommendation of the Civil Defense Workshops which were held in Rosslyn, Virginia in the Fall of 1977 by the Systems Planning Corporation for the Defense Civil Preparedness Agency.

We're in trouble. The Soviets have an excellent civil defense system. We do not. Neither nation had an adequate program in the mid-sixties. But for more than a decade the Soviets have been spending over $1 billion a year on civil defense. We've averaged $100 million. They have a three track program: individual protection, community shelters and population evacuation. We have only one, community shelters, and it's in disarray in spite of the dedicated and dogged efforts of many professional and amateur civil defense leaders.

Why is this a problem? Because it destroys the strategic balance. The best hope for peace, we are told, is the maintenance of the strategic balance. There are varying estimates on the effect of an all out nuclear war. If the Soviets have time to put their civil defense program into operation -- three or four days prior to the holocaust -- the results would be far more destructive to the U. S., which doesn't have a plan (over 150 million dead) than the Soviet Union (roughly 15 million killed) Should we adopt President Reagan's Plan for Civil Defense? It is estimated we can save up to 85 percent of our population. Should the Soviets target population, it is estimated up to two-thirds of our population will be preserved.

Most experts agree we enjoy "rough equivalence" with the Soviets in weaponry. (From my perspective it appears to get rougher each year). But if Soviet weapons have a far greater destructive effect on us than our weapons on them, it's as though they had far more weapons. This makes a mockery of the strategic balance. It doesn't exist.

Once the balance of terror is gone the Soviets have an awesome edge in any confrontation, whether it be at the bargaining table, an act of adventurism in Europe, Africa, the Mid-East or in all-out nuclear war.

It has been said that "eternal vigilance is the price of liberty." Events in Iran and the invasion of Afghanistan have shown that to be true. If Russia is able to grab up one or two more countries, we may be forced into war -- with a strong possibility that the conflict could develop into a nuclear confrontation. Why not provide at least minimal protection for our civilians? Why not teach them to survive? Why not give the American people a civil defense system as good as Soviet citizens have?

Why haven't we done something about civil defense? Chiefly because far too many Americans are the victims of three misconceptions -- the first being the "overkill" fallacy, wherein the casualties per kiloton in Hiroshima and Nagasaki are multiplied by the number of kilotons in the world's arsenal. This assumes that by some means we can collect the entire target populations in the same density as existed in Hiroshima and Nagasaki, and keep them unwarned and vulnerable. A statement of identical validity is that the world's inventory of small arms ammunition, or for that matter, kitchen knives, can also kill the human population several times over.

Another widely held misconception is that much of the world's population would be destroyed by fallout from a large scale nuclear war. On the Beach reflects how this thinking originated. The National Academy of Science estimates that the long term effect of this fallout would only amount to a two percent increase in the cancer rate over a 15 year period. This increase could be countered by not rebuilding many of the cigarette plants that would be destroyed in such a holocaust.

Finally, victims of the doomsday scenario feel, mistakenly, that survivors of a large scale nuclear war would have to live underground for weeks at a time. Not so, our scientist tell us. An individual can protect himself from the most dangerous type of radiation because it travels like light, in a straight line. A handkerchief, folded over six or eight times, can serve as an effective gas mask to provide protection from the less dangerous type of radiation.

We must begin today to rebalance the strategic equation. How do you deter an attack unless you can convince an enemy that you will win the war that he is starting? I find it doubtful that anyone aware of the strategic imbalance believes we would fire any nuclear weapons if it meant the destruction of our society. Without a civil defense system that's precisely what it means.

Basically, this $4.2 billion program requires the authorization of the Federal Emergency Management Agency (FEMA) to increase from $252 million in 1983 to $1.2 billion in 1989.

Gen. Louis Giuffrida, FEMA's director, testified that the President's budget proposal for civil defense of $252 million will allow a reasonable start on the Enhanced Civil Defense Program. Doesn't it make good sense to provide a plan that would help prevent war, but in the event of war, would help protect all Americans?

I hope your Subcommittee Members will join me in implementing President Reagan's Enhanced Civil Defense Program by approving an appropriation of $252 million in 1983 for nationwide civil defense. Our total national defense demands no less.

STATEMENT OF RONALD P. ANDRADE, EXECUTIVE DIRECTOR, NATIONAL CONGRESS OF AMERICAN INDIANS

Mr. Chairman and members of the subcommittee. My name is Ronald P. Andrade. I am the Executive Director of the National Congress of American Indians(NCAI). I want to thank you for allowing NCAI to present testimony on HUD's FY 1983 budget. Our testimony will specifically address appropriations for Indian housing.

The National Congress of American Indians is the oldest and most representative national Indian organization in the country today. Over 170 Indian Tribes and Alaska Native villages, whose combined population totals approximately half a million people, are members of our organization. The members of these Tribes and Villages are direct recipients of the housing HUD provides through its Indian Housing Program.

We urge the subcommittee to support the continuation of this program and fund it at a 4,000-unit level for fiscal yar 1983.

According to a national housing survey conducted by the Bureau of Indian Affairs in fiscal year 1981, 60,200 new homes are required to be constructed in order to bring current Indian housing to adequate standards. In addition, the Bureau concluded that 32,000 Indian homes must be renovated to meet adequate housing standards. Notwithstanding these findings, the Bureau only expects to be able to build approximately 690 new homes and to renovate 3,900 existing homes in FY 1983.

The Indian Housing Program is the primary source of housing construction and rehabilitation funds that Tribes have available to them. Although there are at the present time alternative methods of financing construction and rehabilitation activities in Indian Country, there remains the immediate need to fund building and rehabilitating homes for Indian and Alaska Native families.

A 4,000-unit level for the Indian Housing Program for FY 1983 would mean that the program has not been increased in two years despite inflation. In fact, funding for the program has decreased since FY 1981 when the administration only permitted the release of almost one-third of the 6,000 units Congress had approved for the program in 1980. And, the administration wants a complete recission of the 4,000 units approved last year for FY 1982.

NCAI recognizes the support that the subcommittee has given Indian housing in the past. We urge the subcommittee to continue that support for fiscal year 1983 and to allow the Indian Housing Program to continue its important work.

STATEMENT OF ALAN G. KRAUT, PH.D., OFFICE OF SCIENTIFIC AFFAIRS, AMERICAN PSYCHOLOGICAL ASSOCIATION, ON BEHALF OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION AND THE ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOLOGY

I am pleased to submit written testimony on the FY '83 budget of the National Science Foundation. The American Psychological Association and the Association for the Advancement of Psychology represent over 65,000 psychologists.

Last year, as a result of other Congressional and Executive Branch action, $11 million for the social and behavioral sciences were restored to the NSF budget. Again, we are grateful for this restoration, but we must point out that this figure still represents about a 40% decrease from 1980 funding levels for these areas of science, and the President's request for 1983 does little to make up for this reduction.

Research funding levels for the social and behavioral sciences within the NSF budget continue to be of direct concern to psychologists. Other areas of concern are NSF support for science education, and for women and minorities in science. Unfortunately, these, too, are areas that have been relatively controversial during recent budget debates. However, we believe there is convincing evidence that all of these activities deserve the strong support of this Subcommittee in determining the FY '83 NSF budget.

BEHAVIORAL AND SOCIAL SCIENCE FUNDING AT NSF

At a time when federal fiscal resources must be allocated with the utmost care, the Administration has proposed an over 7.7 percent increase for the NSF budget. This signals to us a welcome commitment to maintaining a strong federal role in basic research. Other participants in the budget process have confirmed this commitment, most notably the House which recently reported out an FY '83 NSF authorizing bill that approves the Administration's request of $1,052.3 million for NSF Research and Related Activities. Because of your critical role in the budget process, we strongly urge the HUD-Independent Agencies Subcommittee to join in this confirmation and approve the full amount authorized for the Research and Related Activities category.

Further and of equal importance, we ask that you uphold the distribution of funds within the Research and Related Activities category that has been proposed in the House authorization. This would restore to 1980 levels the portion of NSF's Biological, Behavioral and Social Sciences (BBS) directorate that funds behavioral and social science.

We recognize and concur in the need for fiscal restraint in preparing this and future federal budgets. However, in recent years, budget cuts have been levied disproportionately against NSF's behavioral and social science programs, to the point where the core of these research areas are jeopardized. In some cases, proposed cuts have been so severe that programs would not have been able to fund any new research projects during the ensuing year. In other cases, complete programs were to be essentially terminated.

A recent review by a committee of the National Academy of Sciences showed that even before the FY '82 cuts, funding in the basic social and behavioral sciences was extremely tight. The proportion of grant proposals actually funded was substantially smaller than in other sciences, and the average amount per grant was also much smaller.

The FY '83 House-passed authorization corrects for past disproportionate cuts by restoring funds to NSF at a more equitable level for behavioral and social science research. The House has earmarked $201 million for the Biological, Behavioral and Social Sciences directorate. This distribution still permits a modest budget increase in all other research directorates.

In making this distribution, the House has recognized how critical it is to the future of our country that we maintain a continuing commitment to accumulating basic knowledge in the social and behavioral sciences. These are the sciences that study human behavior and thought, and there is hardly a single national problem for which solutions do not demand some understanding of human nature. As Dr. John Slaughter, Director of the NSF said in Congressional testimony last year, "The long-term solution to the energy shortage, productivity, new technology , and processes of innovation cannot be addressed without considering the individual in social context. Even in the way scientific research in itself is conducted and organized and new scientific findings are adopted and utilized, there is an indispensable human factor. Without understanding social and behavioral effects more thoroughly, we will not be able to accomplish the task of revitalizing our society, no matter what technological innovations may be found."

We fully support the sentiment of Director Slaughter's statement. Human motivation; personal productivity; worker satisfaction; adjustments to environmental and social changes; these are some of the human issues behind national productivity. These are also the issues for which NSF's social and behavioral research program provide basic knowledge. Instruction; personnel training; problem solving; these are some of the human issues we must address if we are to develop a strong national defense. These are also the issues for which NSF's social and behavioral research program provide basic knowledge.

Our point is that support of NSF research in the social and behavioral sciences is not simply an investment in knowledge, but an investment in the future of our nation. It is an investment that has already produced new technologies based on behavior that have had documented positive effects on the health and economic well-being of the public. In the following pages are many such examples. We offer them as a sample of what federally-funded research in social and behavioral science can mean.

- The field of aviation provides a number of examples of the application of basic behavioral research findings. Most notable has been the identification of a visual illusion occurring during night landings that was a major contributing factor to a series of fatal 727 jet aircraft accidents. The result of this research, the elimination of a problem which had been measured not only in dollars, but in human lives.

  The visual illusion could neither have been identified nor its effects corrected were it not for years of basic psychological research on human perception and psychophysics. It was from basic questions raised in these two areas -- questions such as How do humans perceive their world? and What are the limits of accurate perception? - that such applications emerged.
- Another aviation example involves the F-18 aircraft. The initial

cockpit design of the F-18 prevented a high percentage of Navy pilots from reaching all necessary controls, or even from getting proper feedback from those controls they could reach. With Human Factors specialists involved in the re-design, changes were made that saved the manufacturer millions of dollars and significantly improved the safety of the aircraft.

These Human Factors specialists relied heavily on basic research in sensory psychology and in the fields of cognitive processing and attention in their re-design; just the sort of information provided by NSF sponsored research in the social and behavioral sciences.

- Health economists and others have suggested that the next major step in improving the general health of the U.S. population is not a medical one, but a behavioral one. For example, the Surgeon General's recent report, "Healthy People," examined the 10 leading causes of death in the United States and concluded that seven of these are in large part behaviorally determined and could be substantially reduced by individuals changing their behaviors, including those related to diet, exercise, dental care, smoking, drinking, and the like. The current human costs in these areas and the potential savings in human misery is enormous. It is applications from basic behavioral science research that will be called upon to reduce these costs.
- The behavioral component of major industrial problems is often little attended to. For example, in the next decade it is expected that a billion dollars will be spent in office automation. The implementation of these systems have complex social and psychological problems associated with them, in that their impact on work roles and job functions is little understood. Indeed, the complexity of implementing new manufacturing systems are not well understood, despite the long term commitment involved and the heavy capital investment involved. The success or failure of such industrial changes often directly hinges on the human component. Our ability to understand and predict such factors directly relates to basic research in the social and behavioral sciences.
- Basic research in the social and behavioral sciences plays a much clearer and more consequential role in American institutions and

industry than it is typically recognized. There is a certain irony in that the findings of this research are perceived by foreign countries to have great export value. For example, it is often suggested in our media that the current superior position occupied by the Japanese steel industry is intimately related to their development of the notion of quality control circles. These control circles rest on two major concepts: a statistically based system of quality control, and participative decision-making. The notion of participative decision-making rests very clearly on basic research in social psychology going back three or four decades. There is no doubt that this social technology has had an impact in Japan. One researcher has estimated that employee suggestions for changes in the manufacturing process occur ten times more frequently in Japanese companies than in American ones, along with a much higher rate of implementation of such suggestions.

o The Soviet Union also has recently displayed great interest in developing its knowledge base and understanding of basic processes in the social and behavioral sciences. For decades, research in social psychology was actively discouraged in the Soviet Union. But within the last five years or so, this attitude has changed dramatically. The Soviets are actively encouraging social psychological research in school systems, the work environemnt, and in basic laboratories.

o Biofeedback allows for the conscious control of what are usually automatic bodily functions, such as blood flow, heart beat, and muscle position. Today the technique is being used to effectively treat wide ranging medical problems:

Scoliosis is a disabling and disfiguring curvature of the spine. Biofeedback has been shown in ground breaking research to actually reverse the process;

Applied to heart problems, biofeedback is used to teach cardiac patients to control their blood pressure and, thus, significantly lessen the likelihood of future attack;

Applied to migraine headaches, insomnia, and low back pain, biofeedback is considered by many to be the treatment of choice. Thus, biofeedback is dealing with problems that not only plague millions of Americans, but cost American industry billions of dollars each year in employee absence and poor worker efficiency.

The use of all these medical treatments based on biofeedback began with psychologists interested in the conditioning of the autonomic nervous system of the rat and the basic research question of whether automatic bodily functions could be conditioned.

o Behavior Modification and Behavior Therapy are approaches to changing how an individual acts in certain situations. The techniques would not have come to being without early and continuing basic psychological research on what influences learning. Today, both have been documented literally hundreds and perhaps thousands of times in improving the lives of hospitalized mental health patients and in developing effective therapies for psychological disorders. The techniques also are gaining popularity because of their successful application to problems of obesity, alcoholism, and drug addiction.

What has been less publicized is the effect of such behavioral programs in the industrial sector. For example, Emery Air Freight Company recently reported that a behavior modification program with its employees has increased its use of productive capacity from 45 to 90 percent, with savings of more than $2 million over three years. (Organizational Dynamics, 1973, 2, Winter, 41-50).

A behavioral program also has been used to teach job finding skills to the unemployed of our country. The cost of placement in this Job Finding Club, as the program has been called, was an incredibly low $167 per person and the participants in the program were twice as likely to secure and retain employment as those using other employment programs (Behavior Research and Therapy, 1975, 13, 17-27). The Job-Finding Club concept has now raised considerable interest in the Department of Labor for use in placing clients who otherwise would be eligible for welfare (U.S. Department of Labor, Report No. DLMA-51-17-76-04, 1978).

This Club concept stems directly from principles of learning first investigated through animal research. In fact, the job club's developer is one of the foremost animal learning psychologists in this country.

- Basic research on learning has played a key role in America's space program. The recent successful voyage of the space shuttle Columbia has allowed us all to feel a proud sense of mastery over space, but it was only 20 years ago that we were looking at space with feelings of uncertainty and peril. Among our unanswered questions back then were whether and how well astronauts would perform in the space environment. We answered those questions in part by sending two chimpanzees on a trial mission. The chimps, Ham and Enos, were carefully trained by psychologists who specialized in animal learning. The chimps were sent into orbit, performed their complex tasks perfectly, and were safely returned to earth. Was the training they received from psychologists, and the costs of the trial flights worth it? Perhaps Senators Glenn and Schmitt could provide a better answer than I.
- Conditioned taste aversion is a learning technique in which eating a certain food is followed by a drug which produces an unpleasant reaction. This pairing of food and illness often results in the refusal to eat even a small amount of that food again. The effect was developed in the basic research laboratory by psychologists interested in the psychophysiological mechanisms of taste in the rat, but its applications have gone far beyond the laboratory. Taste aversion has given new insight into the problems and solutions to problems of cancer patients undergoing radiation therapy. A severe problem in radiation therapy had been that patients simply would not eat sufficiently following treatments, compounding the debilitating nature of the cancer, itself. Now, it is a common strategy to deliberately associate a certain single food following radiation treatment so that a cancer patient will continue to eat other foods and maintain proper nutrition.

  The same process has been used successfully in the field of agriculture. In California, coyotes and wolves are fed mutton laced with a drug to produce an unpleasant reaction. The result is that predators, without being harmed, are conditioned in one step to cease attacks on sheep, even though sheep have been preyed upon for generations. Estimates of savings in lost stock run in the millions of dollars. Similarly, in North Dakota there is now a program underway in which black birds are being conditioned by taste aversion to stay away from crops. The potential cost-savings of this project are enormous.

o The Swedish Academy of Sciences awarded its Nobel Prize to distinguished APA member Dr. Roger Sperry for "unlocking the secret of the brain." Sperry, working with animals in the basic research laboratory, determined that the hemispheres of the brain are separate and communicate to each other in special ways only through a connecting band of fibers. The cutting of these fibers resulted in what might be characterized as two distinct brains both working independently within one animal. This research, again with the help of Dr. Sperry, has directly given rise to the understanding and treatment of a variety of severe neurological problems in humans, among them epilepsy, stroke, language disorders, and brain damage. It has also contributed immeasurably to our understanding of how normal brain development occurs.

SCIENCE EDUCATION RESEARCH AND OPPORTUNITIES

Steady progress has been made in the development of basic knowledge in the behavioral and social sciences, largely through the federal government's research investment in the types of activities noted above. For any basic science to accumulate knowledge, there must be continuity of funding. This continuity should be extended to developing the human resources that are necessary to produce and use the highest quality research results in all areas of science. Accordingly, we are asking that this Subcommittee lend its full support to strengthening the NSF Science Education programs and programs for women and minorities in the FY '83 budget.

Excellence in research demands highly trained professionals and a citizenry sufficiently educated to understand and to support a national commitment to science and technology. The original charter for the National Science Foundation authorized the agency to "initiate and support basic scientific research and programs ... and science education programs at all levels." This dual mission recognizes the direct correlation between the quality of preparation in the sciences and the quality of the product: the human beings who conduct research and the work that they produce.

Creating an elite class of scientists should not be the sole goal in a democracy. Everyone--government and business leaders, school board members, workers in almost any field--must be literate in science in order to function well in a highly technological society, and to understand the importance of scientific research to the health and survival of that society.

Yet, these mission objectives are not well-served by the current budget proposal and administrative changes planned for the Science and Engineering Education (SEE) directorate. Only the fellowship program would continue, with minimal support of $15 million for FY '83. All other science education activities would be eliminated.

Federal support of basic educational research would sink to an all-time low under the Administration's proposal. We completely agree with the policy of funding the graduate fellowship program to continue the development of human research talent and resources. But we also feel it is important to support established researchers who develop basic knowledge about learning processes.

The study of human learning is an essential enterprise if the object is to develop educational practices that are effective for as many people as possible. The National Science Foundation's role is particularly crucial if one considers the funding and personnel changes that are being experienced by the National Institutes of Education (NIE). NIE ordinarily could help fill the gaps that would be created by reductions in NSF's science education research support. However, NIE has sustained major budget decreases in recent years, leaving it unable to expand beyond current commitments. This increases the need for NSF to continue to support science education research and development. We urge you to approve a $35 million appropriation for science education research, which was recently passed in the House. This distribution level represents a step towards restoration of funds to this directorate, which has been severely cut in past years.

Psychology as a discipline has an enormous amount to contribute to science education. Recent advances in cognitive psychology, in particular, promise to improve our ability to teach children mathematical and scientific concepts. The attitudinal barriers that many children develop at relatively young ages towards these subjects represent another problem upon which psychological research could be brought to bear. But this will not happen unless there are funds for basic research into learning processes, and funds to transfer this new knowledge into the college and precollege classroom and laboratory.

In addition to restoring the science education research budget, we also urge this Subcommittee to review other Directorate activities that are related to science education, particularly those concerned with increasing the scientific literacy of the general population.

There is growing concern that the United States is educating neither sufficient numbers of professional scientists, engineers, and technologists nor a scientifically literate population. Many of these concerns you have heard: inadequate numbers of science and mathematics teachers in the high schools; few science or math requirements for graduation; and students graduating with only minimal preparation in these fields. At the college legel, laboratories are ill-equipped and fudns scarce for the professional development of faculty members. Lucrative jobs in business and industry remain unfilled because there are too few prepared to do the work, while the national unemployment rate climbs over 9 percent.

The dimensions of the national crisis in science education have been thoroughly studied. What we need now is action. A hiatus of one or two more years in adequate support for science education could prove as damaging to the nation's scientific and technological health as a similar hiatus in research funding would be.

The National Science Board recently established a special Commission on Precollege Education in Mathematics, Science and Technology. The APA is committed to support and cooperate with the Commission, but the pressure of the existing crisis cannot be ignored while the Commission charts promising new directions. The Commission's establishment may be a good opportunity to restructure and refocus the NSF's science education programs, but we cannot stop in our tracks and wait 18 months for its final report and recommendations. Yet, the Administration would confound the already serious science education situation by eliminating existing programs in FY '83 before they are evaluated, and by reducing the experienced staff that has administered these activities over the years.

The need for trained individuals capable of filling national needs for scientists will require the full development of all human resources. This need extends to those groups which have traditionally been excluded from many sectors of the research community, most notably, women, minorities and the handicapped. It is in the interest of the research community as well as the nation to support full participation by women, minorities and persons with handicaps so that diverse talents will be developed and labor shortages in areas of national need avoided. Therefore, we recommend that this Subcommittee lend the full weight of its support to activities that promote scientific literacy and research careers, especially among these groups.

Much of the criticism leveled against NSF's science education activities is in fact a comment on the inadequate levels of funding these programs have received. Therefore, we recommend that the proposed authorization of a $30 million add-on for science education be fully funded in the Appropriating legislation. This would bring the total NSF science education budget to $45 million, which is substantially lower than previous levels of funding, but which would allow a greater variety of activities. This $30 million ideally should be distributed among the categories of precollege, undergraduate, and research in science and engineering education/public understanding programs. Further, it is essential that science career opportunities for underrepresented groups be encouraged through report language and, if possible, through a funding set-aside for the appropriate activities.

STATEMENT OF LAURENCE F. LANE, DIRECTOR FOR PUBLIC POLICY, AMERICAN ASSOCIATION OF HOMES FOR THE AGING

I am Laurence F. Lane, Director for Public Policy of the American Association of Homes for the Aging. AAHA represents nonprofit, community-sponsored housing, homes for the aging, and health-related facilities throughout the United States. Approximately 350,000 older Americans live in over 2,000 member homes, which are sponsored by religious, fraternal, labor, civic and county organizations.

I appreciate very much this opportunity to represent AAHA in today's discussions of the impact of the administration's housing proposals on the elderly. As leaders of the voluntary sector, the nonprofit homes that comprise AAHA's membership have undertaken the responsibilities of providing appropriate housing for the elderly. The tradition of providing charitable care and shelter was initially carried out in homes for the aging - the first congregate housing. Many in existence today date back to colonial times. Today, the involvement of nonprofit organizations in housing has never been stronger. Although there has yet to be a national survey of housing for the elderly, we have found the experience of our membership to be representative. In 1981, over fifty-six percent of AAHA's member homes offered residential living to older persons. This figure has grown over the past ten years and we expect that trend to continue. Residential alternatives offered by nonprofit homes span the continuum of living arrangements, including independent living, congregate housing, service-enriched housing and housing associated with health-related facilities.

In this century, the charitable efforts to meet the social needs of American citizens have been joined by a strong moral and financial commitment by the federal government. This partnership has produced much of the housing for the low-income elderly that is available today. For those of us in community-based organizations who witness daily the urgent need for appropriate and affordable housing for older persons, this commitment has become a pressing priority. It is particularly distressing, therefore, to be faced with the administration's re-definition of the crucial federal role in housing. In fiscal year 1982, funds for housing low-income persons received the largest cut in budget authority of any federal program. For fiscal year 1983, the President's budget calls for additional cuts in low-income housing programs that total almost $5 billion - nearly the combined total of all the cuts in social services, Medicare and Medicaid, food stamps, welfare, education, training and other "safety net" programs.

It is important to emphasize our feeling that the nature and magnitude of the administration's proposals for housing clearly represents a nearly total abandonment of this nation's commitment to assure a safe, decent and affordable home for all Americans. This is a commitment upon which millions of elderly citizens rely. It is also a commitment upon which nonprofit organizations committed to serving older Americans rely.

This curtailment of the federal commitment to meeting the housing needs of older persons will have an immediate and adverse impact on the voluntary sector's capacity to serve. Without a strong federal role, the implementation of the annual goal of 200,000 additional units of housing for the elderly unanimously adopted by the recent White House Conference on Aging is in serious jeopardy. We must, I am afraid, expect an inevitable conflict between this goal and the equally worthy objectives of fiscal restraint and a balanced budget. However, as a nation, we cannot achieve either goal at the expense of the other. A balanced budget based on the elimination of a federal role in meeting the social needs of older Americans is no lesser an evil than irresponsible federal spending to meet those needs.

Housing Production

The American Association of Homes for the Aging strongly believes that the housing needs of elderly persons cannot be met without the active participation of the federal government in the construction and rehabilitation of new rental units. In addition to the continued growth of Section 202, public housing and rural housing programs, we urge that the goals of the Section 8 new construction and rehabilitation programs not be forgotten.

So often in policy discussions, we equate housing for the elderly with the Section 202 direct loan program. Yet, after twenty-two years, Section 202 units represent only 3.5 percent of the elderly-occupied units subsidized by HUD. Public housing is by far the largest landlord for the low-income aged, with over 440,000 units occupied by elderly families. In recent years, the various Section 8 programs have been the greatest contributors to the availability of decent, affordable housing for the elderly - with nearly 70 percent of all newly constructed Section 8 units assisting elderly households. (Figures as of the end of 1980, Urban Institute) It is evident, therefore, that the administration's concession to fund the 1983 Section 202 program in the amount of 10,000 units cannot be expected to significantly improve the availability of housing for the low-income elderly when other major resources for the production of new elderly units have been shut down. In closing down federal assistance for rental housing construction, the administration is effectively closing down new housing for the elderly.

While the federal government is a significant provider of affordable rental housing for low-income elderly, it is virtually the only provider of congregate housing for this group. Only very recently has the federal government officially recognized the value and need for living facilities that address more than shelter needs. Despite considerable bureaucratic consternation, congregate-type housing facilities specially designed to provide an environment where the total needs of the aging residents are met are being built with federal assistance. Too often, it is these facilities that critics of federal housing policy point to and cry, "luxury housing!" But there has yet to be a serious look behind the per unit costs to see what has been built and why. Community space, kitchen and dining facilities, space for health clinics, emergency call systems, physically accessible units, handrails along hallways, self-closing doors... these are not luxuries to an aging resident; they are necessities; necessities that are reflected in higher construction costs. These necessities enable the resident to remain independent in their own homes and avoid costly and unnecessary institutionalization. They provide safe shelter; accessible to those with frailties of age, and protection from fire hazards. Congregate, social care and supportive living facilities will continue to be built for those who can afford it. But we must ask ourselves: who will build these facilities for the poor without the Section 8 program and without public housing? They do not exist in sufficient numbers now, and without a continued federal commitment in the form of a variety of construction assistance mechanisms, the progress we have made in increasing the availability of this alternative housing arrangement will cease.

The serious repercussions of the administration's plan to replace construction programs with voucher assistance is not merely the denial of appropriate housing for the low-income aged. A serious drain on the federal health care budget is likely if the mechanism for developing new congregate-type housing is eliminated. There is substantial evidence that to eliminate construction assistance for elderly housing facilities is to be "penny wise and pound foolish."

The Government Accounting Office, in its report, "Entering a Nursing Home - Costly Implications for Medicare and the Elderly," says it best.

> "The lack of an adequate range of housing options between independent living, supported by community services and the nursing home, is viewed by many as the most critical gap in community-based long term care services...The need for congregate facilities is estimated to be greater than that for nursing home care. In areas where there is a tight supply of congregate facilities and community support services, many individuals may be placed in nursing homes to obtain long term care. This results in substantial inappropriate institutionalization in medical facilities and an accompanying drain on Medicaid dollars."

Many local efforts to stem the flow of frail, but not sick, elderly into nursing homes have failed due to the lack of appropriate housing in the community. The result has been a direct cost to federal and state governments in the form of Medicaid assistance.

Long term care represents about 13.5 percent of all health expenditures, public and private, or some $32 billion in 1980. Nearly $20 billion of this long term care bill comes from public expenditures (HHS, Services Delivery Assessment, 1981). Projected forward, nursing home costs are expected to rise to $44.6 billion in 1985 and $81.9 billion in 1990 (HCFA, National Health Expenditures, 1981). Such cost increases will gravely strain public resources. Yet, a national housing policy that would commit just 5 percent of what we already spend on long term care could fund an additional 20,000 units per year of housing specially designed to appropriately meet the needs of a frail population at far lower costs than nursing care.

The Under Secretary's Taks Force on Long Term Care at the Department of Health and Human Services recently reported that the number of adults needing congregate housing and other sheltered arrangements exceeded the number actually residing in such facilities by more than 1.1 million. By 1985, it is estimated that this unmet need will approach 1.3 million. Over 60 percent of older persons with activity limitations have low incomes. Supporting these individuals in congregate housing can cost one-half of the nursing home expenses for the same population. But the federal government must invest in physical structures that enable this solution to work.

WE RECOMMEND THAT THE SECTION 8, PUBLIC HOUSING AND SECTION 202 PROGRAMS CONTINUE TO PRODUCE NEWLY CONSTRUCTED HOUSING FOR LOW-INCOME FAMILIES, INCLUDING THE ELDERLY. CONCURRENTLY, HUD SHOULD DESIGN AND STUDY OTHER SUBSIDY MECHANISMS THAT WOULD IMPROVE THE CAPACITY OF THE FEDERAL GOVERNMENT TO ASSIST IN THE PRODUCTION OF NEW, AFFORDABLE UNITS, INCLUDING CONGREGATE HOUSING.

The Section 202 Direct Loan Program for the Elderly and Handicapped

The Section 202 program has become a primary federal financing mechanism available to nonprofit, community-based sponsors to build housing for the elderly. We are pleased that the administration and Congress have maintained the funding for this program at the 1980 levels. Such an action balances the critical need for additional housing for the elderly with the need for fiscal responsibility in government spending.

It has been a perilous year for all federal housing programs. Due to the exemplary track record and the widespread popularity of the Section 202 program, the administration withdrew its original intention to eliminate the elderly and handicapped housing program. This year, Section 202 was the only federal housing program funded at 1981 levels and in 1983, Section 202 is the only new construction program funded at all - albeit at only $453 million. At first glance, it would appear that Section 202 is faring comparatively well. A closer look, however, at administrative decisions affecting Section 202 in the past year indicate a less than wholehearted commitment to the goals and future of Section 202 housing by this administration.

Since last September, HUD has issued a report on cost reduction in the Section 202 program; issued a notice requiring specific cost containment measures in 202 development; revised on three separate occasions departmental policy concerning the approval of extensions of expiring fund reservations; issued regulations setting the interest rate at 9.25 percent; tightened policy on the use of project reserve funds to cover the cost of changes during construction; and approved the first pre-payment of an original Section 202 mortgage. In addition, the department has issued regulations that lower per unit develop cost limits, require competitive bidding, and raise the escrow fund required of the sponsor without following the dictates of the Administrative Procedures Act.

The overall intent of most of these actions is clearly to lower the high development costs associated with the Section 202 program. In witnessing and reacting to many of these actions over the past year, AAHA has become increasingly concerned that many of the actions taken in the name of cost containment will have the combined effect of seriously hampering the capabilities of nonprofit sponsors to develop and operate that special brand of housing known as Section 202.

Since 1959, the Section 202 program has provided direct loans to nonprofit organizations to build low cost, appropriate living arrangements for the elderly. To date, nearly 150,000 units are occupied or are in development. In its twenty-year history, the Section 202 program has had but one foreclosure. Credit for the exemplary track record is due to the dedication and commitment of both the nonprofit sponsors as well as to the HUD staff in Washington and the field, who have done much to promote the development of financially and programmatically sound projects.

Section 202 is unique in this respect. Political sponsors are judged not solely on their ability to develop and manage housing, but also on how well the living environment of the facility will serve the elderly residents. Section 202 is far more than a construction program. It is more than a Section 8 set-aside for nonprofit sponsors of housing for the elderly. The average Section 202 project provides more, because the population it serves requires additional features in order to live safe and fully independent lives. Through the Section 202 program, nonprofit sponsors are able to build far more than affordable shelter. The 202 direct loan provides funds for sponsors to create a home - an environment within which the total needs of the aged resident can be met. Design features such as accessible units for wheelchair use, handrails and emergency call systems are not luxurious amenities when they exist solely for the purpose of helping to keep elderly people independent.

The direct loan builds the buildings and HUD provides the rental subsidies that allow low-income people to become residents, but the essential characteristics that determine Section 202 housing come from the charitable donation, community services, funds and the goodwill and dedication of the nonprofit sponsors themselves.

AAHA is concerned because the administration's remedies for reducing the development costs of Section 202 housing do not seem to recognize the unique aspects of this specialized housing. They are based instead upon the assumption that the cost of developing housing under Section 202 is higher than other subsidy programs because of the involvement of inexperienced nonprofit organizations and luxurious project design.

To the contrary, it is AAHA's firm belief that the quality of Section 202 housing is directly attributable to the hundreds of nonprofit sponsors that have successfully negotiated the sometimes torturous HUD development process.

Eligibility for Section 202 funding has been limited to nonprofit sponsors, according to the language of the original legislation, in order to "ensure that funds will be available to those organizations that can best meet the needs of elderly and handicapped people." We strongly urge this Committee to retain the appropriations act language continuing this restriction.

This limitation has enabled the Section 202 program to become one of HUD's most successful programs to date. In its evaluation, HUD found that "elderly housing projects financed with direct loans under the Section 202 program have shown a high degree of viability over the life of the program." This has been due, in large part, to project sponsorship by responsible nonprofit organizations. In its study, HUD concluded that "...most sponsoring institutions have many forms of in-kind contributions to their Section 202 projects; about half have given some financial support, and a few make regular financial contributions. Non-profit sponsors have also assured a community involvement and responsiveness in the development and operation of Section 202 housing."

Furthermore, the nonprofit board of a Section 202 project has a fiduciary relationship with the housing project and the residents served and may be viewed as the community agent ultimately responsible for the overall operation of the project and the well-being of the residents. This community presence is necessary to ensure "accountability" and that appropriate services are rendered to elderly and handicapped residents. The Section 202 program's success may be attributed to a great degree to the fact that nonprofit sponsors have made a long-term commitment to providing housing and services to elderly and handicapped individuals. In order to ensure that this record is continued, and that government funds are utilized in the best way possible, we would encourage the Committee to continue the limitation of eligibility to nonprofit sponsors.

The 202 program's track record and popularity would certainly justify a continuation of the policy that limits program participation to those who are willing to make a commitment of resources to provide housing and services to the needy elderly without making a profit.

Other state and federal housing programs allow nonprofits to form limited partnerships with profit-making concerns in order to develop elderly housing. Many AAHA members have used this financing approach. Given the availability of limited partnership ownership of assisted elderly housing, we see no benefit to the elderly resident or to the nonprofit sponsor in changing the current restrictions.

We seek continued congressional commitment to ensure that there is community involvement and responsibility in the development and operation of Section 202-funded housing for the elderly and handicapped.

Urban Systems Research and Engineering, Inc. recently issued a draft of its forthcoming report on a study analyzing the costs of HUD multifamily housing programs. This study, commissioned by HUD, reveals several important facts relevant to the costs associated with nonprofit housing development.

The draft report states that Section 202 hard development costs are indeed higher than those associated with standard Section 8 construction, but that the increased costs are due at least in part to the special design requirements associated with elderly and handicapped tenants. The study goes on to say that cost differentials between Section 202 and other programs reflect subtle design differences that may contribute to the quality of life, but lead to increased improvement costs. Further, when all relevant factors such as lower land costs and lower soft development costs are statistically accounted for, Section 202 turns out to be only 12 percent more expensive than unsubsidized FHA units. The cost to develop public housing units is 37 percent higher than unsubsidized FHA units. Furthermore, the use of nonprofit sponsors, lower soft development costs and favorable financing cause Section 202 to have the lowest per unit subsidy costs of any HUD program. These facts dispel the popular myth that Section 202 is the most expensive form of HUD housing.

Over the years, AAHA has fought to maintain the high standards of design and construction associated with the Section 202 program. In the short term, the cost of this quality housing is more than offset by relatively low subsidy costs, the long term commitment of sponsors and the quality of life Section 202 offers its residents. We are deeply concerned, therefore, about the department's intention to lower the Section 202 per unit costs to coincide with Section 221(d)(3). Not only will this reduction seriously jeopardize the ability of nonprofit sponsors to produce high quality 202 housing, it is directly contrary to congressional intent. Responding to similar efforts by HUD to arbitrarily lower costs, Congress directed HUD to establish Section 202 per unit mortgage limits without regard to the limits established for projects for the elderly developed under Section 231. Such an action would, in the view of Congress, result in improper cost limitations on Section 202 development. Are we not faced with an analogous situation today, with HUD's intention to lower per unit mortgage limits to those of a completely different program?

Our organization has been working closely with the authorizing committees of both the House and Senate to assure meaningful legislative direction to the department in the management of the Section 202 program.

We solicit the continued cooperation of the Appropriations Committees in our efforts to (1) provide borrowing authority for the Section 202 program sufficient to meet the target of 20,000 new units per year (or up to the amount which will be authorized by the legislative committees), (2) retain a focus of the eligibility for the Section 202 program to bonafide not-for-profit sponsors, and (3) carefully scrutinize the regulatory changes suggested by the department to ensure their purposes are program-enhancing.

Congregate Housing Services Program

In 1978, Congress took a historic step in recognizing that congregate services are an essential part of housing serving the elderly and handicapped. By enacting Title IV, The Congregate Housing Services Act, Congress acted to ensure that public and Section 202-sponsored housing serving the elderly and handicapped is truly responsive to the needs of these individuals. After two years of successful operation with modest funding, the future of this innovative, cost-effective program is in doubt.

The Economic Recovery Plan curtailed funding for the Congregate Housing Services Program. The administration has asked for no funding in its budget request for the coming year. However, this Committee should be aware that both the authorizing committees during mark-up continued authorization for the Congregate program.

We view with alarm the apparent dismantling of the Congregate program before effectiveness can be judged. As I discussed earlier, providing services to frail elderly persons in their homes - be it a private residence or a congregate setting - is far more attractive than placing them in a medical institution, just so they can get the assistance that is needed. The average cost per day for a resident participating in the Congregate Housing Services Program is $9.85, of which only $6.15 are federal dollars. In comparing this to a daily cost of anywhere from approximately $10 to $33 dollars that are required to support the average nursing home resident, the value of the congregate approach becomes clear. Even if the dollar figures were the only redeeming factor in the program, the difference between the two alternatives convincingly favors the congregate services. I would note that the advancement of less costly facility-based programs should be in sympathy with the administration's cost-cutting Economic Recovery Plan.

The cost factor, however, is not all that is positive about congregate housing services. As it is presently structured, the program is uncomplicated. Funds for congregate services are provided from a single source - HUD - directly to housing project sponsors. The sponsor, having surveyed the residents, has established a package of services which are specifically designed to meet the needs of each eligible resident. The funds are used to provide the services in this package. It is important to realize that the program does not compete with or take away from other social services; rather, it picks up where they leave off. In so doing, it works to develop a continuum of care. AAHA appeals to the members of the Committee to provide $10 million to continue this program.

Housing Vouchers

The administration's plan to modify the Section 8 existing program and create a housing voucher system will have, in our view, serious consequences for the elderly consumer. The experience of the Section 8 existing program and the Experimental Housing Allowance Program (EHAP) illustrates this point. By 1980, elderly participants in the Section 8 existing program were outnumbered by elderly persons living in Section 8 new construction units more than 2 to 1. Over one-half of the elderly couples lucky enough to receive Section 8 existing certificates could not find housing in the community within the sixty days allotted them. The EHAP findings show that elderly persons are less likely to know about voucher assistance and less likely to enroll once they do know about it. The Section 8 existing program is not an inappropriate means of providing housing assistance, but for the elderly consumers whose housing needs are far more complex than mere affordability, it cannot stand alone as the only assistance mechanism.

The SSI or Supplemental Security Income program offers another look at how vouchers could affect the elderly. As you know, SSI is an income maintenance program for the aged, blind and disabled, administered by the Social Security Administration. SSI can provide for direct cash payments to consumers. Like the voucher system, recipients are free to spend their money as they choose. But in reality, SSI payments are not sufficient to meet the varied needs of the elderly, blind and disabled, most of whom require some assistance in order to live independently. Many have turned to boarding homes where their SSI checks are turned over to the owner for shelter, meals, some services and a small personal allowance. Fatal fires, reports of fraud, abuse, and poor quality care have focused national attention on the boarding home issue. Many experts and organizations, AAHA included, suggest a vendor payment approach, in which states would have the right and responsibility to enforce simple structure and quality standards for such homes. While it is difficult to argue for increased government regulations, there are areas where profiteering and victimization require government oversight. This is especially true where government dollars are involved. We are not saying that housing assistance in the form of vouchers will necessarily duplicate the SSI problem. However, the free market system operates less well for the low-income elderly and disabled than for any other population group. Subjecting the housing future of the low-income elderly to market forces does not guarantee that the private sector will respond and develop the suitable alternatives.

It is more likely that vouchers will be scarce and that the elderly consumer will be forced to compete with families for dwindling housing dollars. For many healthy, mobile and younger people, vouchers may, in fact, be the best choice. Taken to its extreme, however, we run the risk of creating a situation where the weakest of the poor are brought into competition with economically stronger families for limited amounts of public dollars and private initiatives. Beyond the conceptual problems found in the voucher approach as the only mode of federal housing assistance, the "modified" Section 8 existing housing program, as proposed by the administration, raises other specific issues. Lowering fair market rents by twenty percent will further reduce the number of available units voucher holders may rent at 30 percent of their incomes. Payment of additional costs beyond the rent limit will place great strain on the fixed incomes of elderly recipients. This provision is especially detrimental since HUD makes no provision for increasing subsidy payments when rents go up.

THEREFORE, AAHA RECOMMENDS THAT THE SECTION 8 EXISTING PROGRAM REMAIN INTACT AND CONTINUE TO BE ONE OF SEVERAL DELIVERY MECHANISMS FOR FEDERAL RENTAL ASSISTANCE.

Tenant Rent Increases

In considering the impact of the proposed changes that would raise tenant rents, we move from the impact on our capacity to meet unmet needs to the direct and immediate toll these policies will have on individual residents of HUD housing. Therefore, it is useful to consider who these residents are.

The vast majority of elderly residents of HUD-assisted housing are single women - the survivors of our society who are outliving their age expectancies. In public housing, as many as 45 percent of the elderly residents are over 75 years of age. They are also poor - the average annual income with elderly families in public housing is roughly $3,500. Residents of Section 8 new construction are a little better off, with an average of $4,300 per year. In every program, at least two-thirds of the residents rely on Social Security as their major source of income. And if a resident has any assets at all, they are most likely to be no more than $1,000.

Last year, AAHA supported the administration's plan to increase tenant rents from 25 to 30 percent of adjusted monthly income. We felt this was an equitable way to share the burden of the increasing cost of subsidized housing. Residents of AAHA member facilities also supported the rent increase, although it would mean a 20 percent rent increase when fully implemented. In a recent letter to President Reagan, the residents of CTA River Apartments, a Section 236 project in Tampa, Florida, wrote, "Even though (the rent increase) will put a strain on our budgets, we have accepted this change because it will be phased in and will allow us to plan our budgets to reflect this increase." This letter illustrates the general feeling of our membership that we must do our part to reduce the federal deficit.

This year we are faced with three additional proposals that will significantly raise tenant rents, including the value of food stamps as income for the purpose of determining eligibility and rent share and eliminating deductions for excessive medical expenses. Furthermore, HUD wants to raise the cap on tenant rent increases from 10 to 20 percent to achieve the maximum immediate effect of these changes. AAHA firmly believes that these proposals should not be adopted.

First, with respect to counting the value of food stamps as income, we reject this for the simple reason that it places the greatest burden on the very poorest households, those receiving maximum food stamp assistance. Like the voucher system,it affects those persons least able to compete. In this case, it is large, very poor families who will be hardest hit by the food stamp proposal. Furthermore, food stamp assistance encourages a nutritionally adequate diet for older persons. It is a well known fact that a healthy diet helps to prevent the costly and unnecessary institutionalization of elderly persons. Counting food stamps as income could discourage senior citizens from applying for food stamps and consequently lower the quality of their diets.

WE URGE THE CONGRESS TO REJECT THE ADMINISTRATION'S PROPOSAL TO COUNT THE VALUE OF FOOD STAMPS AS INCOME IN SUBSIDIZED HOUSING.

Second, the administration has stated that its regulations standardizing income deductions and calculations will substitute the present deductions from income of medical expenses exceeding 3 percent of gross income with a standard deduction of $300 for all elderly individuals. Again, we cannot support this change because it will place the greatest burden on those least able to pay, the very poor and the sick. In this case, the elderly and handicapped will bear the brunt of this measure.

We have received data from one Section 202/8 facility in Ohio where a resident's medical expenses ran as high as $3,800 per year, more than one-third of his annual income. Without a rent cap, this person would experience a 40 percent rent increase next year. A random sample of residents in this project showed that the average rent increase due to the substitution of a $300 deduction for actually incurred medical expenses alone would be at least 25 percent next year.

A more complete analysis of the combined effect of raising rents to 30 percent of adjusted income and eliminating medical deductions was carried out at another member home in Florida. This study shows that over the five-year phase-in period, as much as 88 percent of a resident's improvement in income would be absorbed by the rent increases alone. With all the other benefit reductions facing the poor elderly, this is clearly an excessive measure.

In the case of medical deductions, we are not handing residents something for nothing. Deductions for medical expenses must be documented to be actual out-of-pocket expenses. A standard deduction based on age alone would give healthy seniors a bonus and penalize the infirm.

AAHA URGES CONGRESS TO ENACT A PROVISION DIRECTING HUD TO CONTINUE ALLOWING INCOME DEDUCTIONS FOR MEDICAL AND OTHER USUAL EXPENSES.

We support phasing in the 30 percent of income rent payment at one percent per year and urge the retention of the 10 percent cap on rent increases as a result of provisions of the 1981 Omnibus Budget Reconciliation Act.

Additional Concerns

Mr. Chairman, times does not permit a complete discussion of all the items that are of concern to our members. Appendixed to this testimony is our letter of 9 April 1982 declaring our strong opposition to the elimination of the Section 232 FHA insurance program and other valuable supports for capital development.

I thank you for this opportunity to share with the Committee our views about these important matters of mutual concern.

Sent to key Members of Congress
and congressional staff.

9 April 1982

Knowing of your deep concern for the safety of residents of health care facilities, I am writing on behalf of the members of the American Association of Homes for the Aging to bring to your attention the proposed repeal of Section 232 of the National Housing Act.

Section 232 is an FHA insurance program, securing the risk of construction and renovation mortgages for skilled and intermediate care facilities. Amendments adopted by the Congress during the past decade have extended the program to ensure loans for the purchase and installation of fire safety equipment. Congress also has extended mortgage insurance to promote non-residential care facilities, such as adult day centers, under this provision. Section 232 is the only federal statutory provision offering an incentive for nursing home facilities to upgrade their fire safety protections.

Our association strongly opposes the repeal of Section 232 as recommended in the President's budget. In spite of a commitment by the Secretary of Health and Human Services that he would oppose actions which might injure the health and safety of nursing home residents, and a further promise by the Under Secretary of that department that the administration is committed to improving living conditions in boarding homes, the FY 1983 budget proposes to scrap the only means by which the purchase of fire safety equipment by providers is encouraged. Likewise, the administration has articulated a concern for expanding noninstitutionalized approaches to the delivery of services to the frail and vulnerable, and it at the same time recommends the repeal of the insurance program which secures conventional mortgages for expanding adult day care and senior center facilities. We vigorously urge the Congress to resist such efforts to thwart the improvement of long term care. It has been our long-standing position that Section 232 insurance protection should be extended to all long term care facilities, including domiciliary care and boarding homes, as a meaningful support for renovating and improving the fire safety of such shelters.

The attempt to repeal Section 232 is part of a larger trend reflected in the FY 1983 budget as transmitted by the President to prevent the construction and renovation of health care facilities. Over 3,000 existing nursing homes were constructed before 1923. During the past decade, we have replaced less than one-half this number by new construction. Data on remodel and renovating indicates marketplace inactivity. With the exception of significant fire safety construction by facilities with fewer than 50 beds using the Section 232 program, there has been a significant slowdown in construction for expansion and/or remodeling. A signficant fact of the present nursing home marketplace is one of "excess demand." Under such a condition, those most in need - the indigent and most chronically impaired - have difficulty in obtaining appropriate services. Yet, the administration has proposed the repeal of both the Section 232 Nursing Home Mortgage Insurance program and Section 242, the Hospital Mortgage Insurance program, under the perverse logic that if you don't build service capacity, people will not be served and Medicare and Medicaid dollars can be saved. Both of these programs have been most actively used in inter-city and rural communities. The government insurance programs have provided a focus of investment towards a target population of those most in need.

The planned demise of this valuable HUD mortgage insurance program for health facilities is further compounded by the proposed restriction on the use of tax-exempt bonds. The administration has proposed such stringent limitations on the tax-exempt bonding instruments as to threaten the use of this market incentive for upgrading services. For long term care, the elimination of the tax-exempt bonding avenue severely impairs the development of full-service communities which provide living arrangement alternatives to the medicalized nursing complex. The unwillingness of the Department of Housing and Urban Development to permit the combination of private purchase of tax-exempt bonds with FHA-insured housing loans has already limited the expansion by community-responsive not-for-profit providers into enriched campus environments serving older persons. Significant limitations on the bonding market might further restrict the availability of such quality living environments at an affordable cost.

Futher, as we have pointed out in previous correspondence with the Congress, the proposed budget for the Department of Housing and Urban Development undermines the development of suitable housing for all Americans, and especially the elderly. The meager portion of Section 202 Housing for the Elderly and Handicapped units projected in the budget is but a small drop in proportion to need and we believe the legislative changes to permit the use of this valuable housing program by profit developers is the first stage in dismantling its usefulness. Adequate shelter is the foundation of a sound long term care policy.

The capital market restrictions recommended in the FY 1983 budget undermine public efforts to develop safe and humane health facilities, and they significantly impair the development of housing and services alternatives.

We urge the Congress to:

(1) Extend the provisions of the Section 232 mortgage insurance program expanding the availability of mortgage insurance to domiciliary care and boarding

homes (the definition of long term care facilities adopted by the Congress in the Older American Act Amendments of 1981);

(2) Extend the provisions of the Section 242 hospital mortgage insurance program clarifying the use of such insurance protection for the renovation of specialized care facilities providing non-residential care and hospice services;

(3) Continue the availability of tax-exempt bonding for health care institutions and residential communities meeting the needs of the elderly which are under not-for-profit sponsorship;

(4) Instruct the Department of Housing and Urban Development to permit the combination of tax-exempt financing approaches with insured programs so as to maximize the availability of living environments for the elderly; and

(5) Enact a meaningful housing policy which provides support for the construction of appropriate shelter for those in need and continues a viable incentive for not-for-profit providers to expand housing programs.

Your support and action on behalf of these goals is appreciated.

Sincerely,

Laurence F. Lane
Director, Policy Development
and Implementation

Statement of E. J. Newbould, President, Water Pollution Control Federation

This letter conveys to you the thoughts of the Water Pollution Control Federation on U.S. EPA's budget request for FY '83. I regret that we were unable to accept your kind invitation to testify before the subcommittee on May 25th. Nevertheless, I hope that you will include this letter in the hearing record. For the sake of clarity, I have divided our remarks into several categories.

Operating Budget

In the water quality area EPA will be asking for 76% of the budget authority it estimates is necessary for 1982 and 56% of the budget authority it had in 1981. It is asking for 82% of the workyears needed in 1982 and 68% of the workyears consumed in 1981. Table 1 illustrates these figures.

TABLE 1 - EPA RESOURCE LEVELS FOR WATER POLLUTION CONTROL ($ in thousands)

	Actual 1981	Estimate 1982	Requested 1983	% 83v.82	% 83v.81
Budget Authority	334,348.5	236,796.7	185,965.7	75.5	55.6
Obligations	318,236.9	248,598.0	192,294.0	77.4	60.4
Outlays	343,398.4	273,429.6	212,285.5	77.6	61.8
Permanent Full-time Yrs.	2,781.7	2,246.3	1,849.5	82.3	66.4
Total Work Years	3,352.5	2,787.4	2,292.0	82.2	68.5

There is no question that such reductions will mean that EPA does less work in 1983 than it did in 1981 or will do in 1982. However, the Federation notes that EPA has set itself some clear objectives for the coming fiscal year, and we believe that the question of whether its budget request is large enough to meet those objectives can not be answered until October 1983. By then we will know how successful the agency was in meeting its objectives.

President Reagan's interest in reducing the regulatory demands of federal programs has been faithfully followed by Administrator Gorsuch and her team. The number of regulations in the municipal construction grants program has been significantly cut, for example. These changes should help the EPA do more with less. How much more remains to be seen.

Assistance to the States

A critical element of EPA's current operating plans is the assumption of more direct program management responsibilities by the States. WPCF has long been on record in favor of State program management with U.S. EPA oversight. However, state program administrators have greeted EPA's invitation to participate more heavily with caution, since their budgets face the same fiscal constraints that the federal budget does.

EPA expects to obligate $51.2 million towards state administration costs through section 106 of the Act. That is about the same amount that was obligated in 1981. In 1983, the EPA request is $40,845,000--approximately 79% of the 1982 figure.

WPCF is concerned that reducing the budget for section 106 activities will work against EPA's objective of having 46 States accept partial delegation and 25 of the 46 assume full delegation during FY '83. A problem will arise if a significant number of states decline EPA's offer of more authority.

We are aware that States may use money from section 205(g) for the program management costs of 201 grants administration, NPDES permit management, and areawide planning. They also may use funds from section 205(j) for costs associated with water quality standards programs. But any funds taken for these purposes must come from each State's 201 allotment and must be negotiated with the Regions. Until EPA completes its new policy on greater use of water quality standards, the usefulness of these sources is an open question.

Therefore, WPCF wishes to note its concern that state program management funds are being cut at a time when greater state participation is critical to making things work while the federal government reduces its own expenditures in this area.

The Federation has consistantly been opposed to the use of construction grant funds for purposes other than actual construction. Now that the federal authorization has been reduced to $2.4 billion there is more reason to restrict the use of the funds. We would prefer that all funds for state management activities be appropriated strictly through section 106, rather than from the other dedicated appropriations, such as 201 construction grants.

Manpower Training

WPCF is disappointed to learn that funds for manpower training have been eliminated from EPA's FY '83 budget request. This means the federal government has decided that it has no more interest in professional graduate training, State agency fellowships, undergraduate training, curriculum development, and other special training projects in critical areas of water pollution control.

To be candid, Mr. Chairman, this decision runs counter to the contents of several reports from the Government Accounting Office, testimony before your subcommittee on May 25th, repeated testimony before the Senate Environment and Public Works Committee, and oversight investigations from the public works committee in the other chamber. We strongly believe that the federal government has a continuing obligation in this area--if only to protect the substantial investment made in the 201 construction grants program.

The pay-off from relatively small investments in training is very large. It helps to produce the next generation of scientists and technicians to run the facilities being built now and to work on the pollution control problems of the near future. We urge you to consider recommending an appropriation of at least $1.0 million for training in FY '83. This is half of the sum appropriated in FY '81 and roughly 0.1% of EPA's total operating budget.

Water Pollution R&D

EPA's FY '83 request for water pollution research and development is approximately 50% of its projected FY '82 budget. It is just over 45% of the FY '81 obligations. WPCF supports a strong national program for water pollution control R&D. Consequently, we are concerned that the level of support for R&D not be reduced suddenly or drastically.

When we examine the budget requests for water quality, municipal wastewater, and industrial wastewater R&D, we find reductions of 20%, occasional cuts of 50% or greater, and the elimination of some research programs altogether. Congress has been critical of EPA's R&D expenditures in the past. The Reagan Administration is sensitive to that skepticism and has laid out its R&D objectives for FY '83 carefully. WPCF follows closely the EPA research program and will be watching the development of the agency's R&D work throughout the coming year. We hope to have more to say about progress in this area at a later date. Table 2 illustrates R&D budgets and expenditures for water pollution control.

TABLE 2 - EPA BUDGETS FOR WATER POLLUTION R&D ($ in thousands)

	Actual 1981	Estimate 1982	Requested 1983	% 83v.82	% 83v.81
Water Quality Non-Energy					
Salaries & Expenses	13,378.7	12,713.0	10,143.3	79.7	75.8
Research & Development	11,850.7	6,429.7	900.0	13.9	7.5
TOTAL	25,229.4	19,142.7	11,043.3	57.6	43.7
Municipal Wastewater					
Salaries & Expenses	6,606.0	7,169.8	5,514.8	76.9	83.4
Research & Development	8,132.0	9,398.6	6,117.0	65.0	75.2
TOTAL	14,738.0	16,568.4	11,631.8	70.2	78.9
Industrial Wastewater					
Salaries & Expenses	3,993.5	3,952.1	3,200.3	80.9	80.1
Research & Development	5,947.3	5,426.5	1,834.7	33.8	30.8
TOTAL	9,940.8	9,378.6	5,035.0	53.6	50.6
GRAND TOTAL	49,908.2	45,089.7	22,675.1	50.2	45.4

Unexpected Changes of Course

These comments are concluded with a point or two about the impact of unforseen actions on EPA's work plan. This agency, more than many, is subject to a great deal of outside pressure. Sometimes that pressure takes the form of legal action in which the plaintiff argues that EPA should be doing something different (or something more) than it is doing in a given area.

Effluent guidelines development is a case in point. In early May a federal judge ruled EPA must stick to the schedule for promulgating those guidelines even though it had asked for extensions ranging from 10 to 29 months. Rulings of this type have a direct effect on how money is spent and how people are used. Through no fault or deliberate decision of its own, EPA could find itself unable to meet some major objectives in the water pollution control area. WPCF is concerned that EPA's FY '83 budget request--however carefully crafted and patiently justified--will provoke organizations in both the environmental activist and the industrial camps to take such actions. Recent history shows that maneuvers of this sort can be an effective way of forcing EPA to change its priorities.

Mr. Chairman, thank you very much for the opportunity to comment on the Environmental Protection Agency's FY '83 budget. On the whole, we believe it is a sound fiscal plan during a time of very tight circumstances. If you have any questions or if you would like to follow up on any of my comments, please let me know.

STATEMENT OF E. STANLEY HAWKINS, PRESIDENT, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

The International Association of Fire Chiefs (IAFC) is a professional organization representing the nation's paid and volunteer fire chiefs who are responsible for directing local governments' fire prevention and control activities, emergency medical services, and emergency response to natural and man-made disasters. The members of the IAFC respectfully request restoration of funding within the Federal Emergency Management Agency (FEMA) budget for the United States Fire Administration (USFA).

The International Association of Fire Chiefs has recognized that the fire problem can overwhelm the capabilities of local fire departments. The history of tragic fires and disasters has convinced our members that a collective and cooperative effort on the part of local, state and federal governments is absolutely essential to combat this problem.

At issue today is the federal commitments to fire protection. The nation's fire chiefs, the entire fire service community and the U.S. Congress have worked for many years to create and maintain a federal focus on the nation's fire problem. Yet now we are faced with the elimination of the U.S. Fire Administration, the focal point of this federal effort.

The President's fiscal 1983 budget message addressed the elimination of the U.S. Fire Administration by stating:

> "The goal of this program has been to reduce by 50% the nation's loss of life from unwanted fire and to achieve significant reductions in property and non-fatal human injury due to fire by the year 2000. This program has improved the cost-effectiveness of the various fire protection services. Because of the significant decrease in

> loss of life and property resulting from fire and the increased efforts of the private sector, this program will be discontinued in 1983. However, the efforts of the National Fire Academy will continue to provide training to state and local fire officers and officials."

Data on the fire problem does not support this conclusion. The following summary of the 1980 National Fire Experience Survey conducted by the National Fire Protection Association (NFPA) and supported by the U.S. Fire Administration paints a grim picture of the national fire problem in the United States.

* 6,505 civilians were killed as a result of fires in the United States.
* 30,200 civilians were injured, and required hospitalization, as result of fire in the United States.
* 770 civilians died as a result of incendiary fires.
* 134 paid and volunteer fire fighters were killed in the line of duty.
* Fires across the United States accounted for an estimated $6,254,000,000 in property losses.
* Property loss in residential fires alone accounted for an estimated $3,042,000,000 damage.
* Indirect losses from fire accounted for an estimated $15,000,000,000.
* Fire departments across the United States attended 2,988,000 fires.

Although the fire problem often received scant attention from the media and the public, fire is responsible for 20 times more deaths each year in the United States than floods, hurricanes, volcanic erruptions, tornadoes and earthquakes combined.

I do not believe that a significant decrease in life and property losses has, in fact, occurred. Further, the significant indirect and direct losses associated with fire will continue to have a negative impact on our nation's economic recovery by putting individuals out of work and reducing the tax base. In addition, it is doubtful that the private sector will pick up the important programmatic, research and development, and data collection activities conducted by the U.S. Fire Administration.

The U.S. Fire Administration should be funded in fiscal year 1983 at a level of $8.5 million with 53 full-time equivalent positions. It would seem that somewhere in the FEMA request of $891,859,000 in budget authority, $966,000,000 in outlays and 2,412 permanent full-time equivalent positions, funding and personnel slots could be found for the U.S. Fire Administration.

When compared to the FEMA proposed budget of $891,859,000, the $8.5 million requested for the U.S. Fire Administration seems to be quite minimal. Yet, this request could have an impact on the more than 6,500 deaths and $21 billion direct and indirect losses suffered annually in the United States.

This request seeks only to maintain the activities and level of involvement currently provided by the U.S. Fire Administration. This would provide a minimal assistance of effort to assist the nation's fire service to be more effective in their efforts at fire prevention and control. Funding for the U.S. Fire Administration does not provide any monies for the salaries of fire service personnel or the operation of fire departments.

Recently, comprehensive emergency management and emergency first responder have become part of the vocabulary of emergency organizations and FEMA. But the reality of comprehensive emergency management and emergency first response is not new to the fire service. The nation's fire service historically has been the first to respond to emergency situations threatening life or property. Therefore, the nation's fire service, serving as an emergency first responder, should be considered the primary operational constituency of the Federal Emergency Management Agency as well as the U.S. Fire Administration.

With the President's increased interest in enhancing civil defense efforts, it is in the best interest of the nation to have a well-organized and operationally efficient fire service. The nation's fire departments have the organization, training, personnel, equipment and communications systems to respond to emergency situations and disasters.

It is inconsistent for the Reagan administration to call for increased efforts in civil defense, and, at the same time, call for the elimination of the U.S. Fire Administration. Clearly, the fire service and U.S. Fire Administration have a significant role to play in the emergency response to,and recovery from, a natural or nuclear disaster.

The IAFC has endeavored for many years to define clearly the legitimate federal role in local fire protection and disaster response. This was demonstrated by IAFC efforts to support passage of the Fire Research and Safety Act of 1968 which established the National Commission on Fire Prevention and Control; support passage of the Federal Fire Protection and Control Act of 1974; participate in the selection of the National Fire Academy site in Emmitsburg, Maryland; supported the transfer of the United States Fire Administration and the creation of the Federal Emergency Management Agency; and, continuously engaged in efforts to secure adequate funding for the United States Fire Administration and FEMA.

The members of the IAFC supported President Carter's Reorganizatio Plan No.3 and the creation of FEMA after long and deliberate negotiations within our organization and his administration. Our support was based on the promise that FEMA would benefit the fire service and that the U.S. Fire Administration would be enhanced in an emergency agency.

This support was based on the following reasons:

1. To provide a separate and identifiable federal agency which would commit its total resources to assist state and local fire protection efforts in dealing with the nation's fire problem.
2. To ensure that the national focus on fire would be strengthened and not diffused or subordinated to disaster-related activities.
3. To ensure that FEMA and the USFA would be responsive to, and deal directly with, the state and local fire protection community.
4. To establish a National Fire Academy and related system to provide direct assistance to state, local and college fire training and educational programs; and, a quality outreach program to the fire community.
5. To ensure that the agency would maintain emphasis on fire safety and prevention.
6. To ensure that fire research and technology would concentrate on current fire problems.
7. To ensure that FEMA and the USFA would not have regulatory capabilities with the power to intervene in the affairs of state and local government.
8. To ensure that FEMA and the USFA would preserve the role of the fire service and would continue the dialogue with the fire service in matters of mutual concern.

While working with President Carter's Reorganization Project Team, we were assured that the transition of the fire administration to FEMA in no way would inhibit the integrity, focus, mission and effectiveness, or the authorities and responsibilities of the fire administration as identified in Public Law 93-498. The points of this agreement should be honored by the current Administration.

On May 4, 1973, the National Commission on Fire Prevention and Control released its report, titled America Burning. This report was based on approximately two years of effort by fire service professionals, public management experts, the media and Members of Congress. The findings remain valid and the recommendations sound. This important work should not be overlooked during the debate to restore funding for the U.S. Fire Administration. Certainly, the fire problem is as severe now, if not worse, as it was at the time of America Burning's publication.

From our past involvement in the establishment of the U.S. Fire Administration under Public Law 93-498, Public Law 95-422 and the creation of the Federal Emergency Management Agency under PRP No.3 of 1978, two points are clear:

- The intent of the U.S. Congress was to have a U.S. Fire Administration and National Fire Academy with their own identity and mission.
- The nation's fire service, approximately 1½ to 2 million persons, supported the establishment and maintenance of the U.S. Fire Administration and the National Fire Academy.

The FEMA budget request indicates that the National Fire Academy's training and education programs will be continued. We in the IAFC applaud its efforts to provide specialized training for the nation's fire service personnel. Nevertheless, the programs provided by the National Fire Academy can not meet the research and development needs of the fire service, nor can it replace the efforts of the U.S. Fire Administration. The training programs of the National Fire Academy are essential, but so are the U.S. Fire Administration programs for research, fire fighter safety and health, local government assistance, improved fire service management techniques, and model programs in such specialized areas as emergency medical services management, hiring and promotional testing, and increased opportunities for women in the fire service.

The members of the IAFC generally support the FEMA request because the fire service is affected by many of FEMA's activities involving disaster response and relief, state and local government assistance for emergency planning, and the National Emergency Training Center. However, we are concerned and distressed by the zero funding for the U.S. Fire Administration.

The members of the International Association of Fire Chiefs firmly believe that assistance to fire prevention and control activities is clearly a legitimate function of the federal government. It is also clear from the legislative history of the creation of the U.S. Fire Administration and FEMA that the U.S. Congress intended as part of FEMA to be responsible for carrying out the mandates of Public Law 93-498, the Fire Prevention and Control Act of 1974.

The members of the International Association of Fire Chiefs respectfully request that you and your colleagues restore funding for the U.S. Fire Administration and ensure adequate funding for the National Fire Academy.

STATEMENT OF THE NATIONAL FEDERATION OF FEDERAL EMPLOYEES

I appreciate this opportunity to present the views of the National Federation of Federal Employees on the proposed fiscal year 1983 budget for the Veterans' Administration, the Department of Housing and Urban Development and the Environmental Protection Agency. NFFE represents a significant number of employees from these three agencies, and we are concerned with the spending and personnel recommendations outlined in the agencies' budget justifications.

NFFE's concern has been heightened by the Administration's not-so-subtle attacks on the Federal workforce. Unfortunately, the budget process, particularly the appropriation process has become an area in which civil servants are assaulted through drastic pay, benefit and employment reductions. The budget process has become so highly politicized that spending bills are often delayed or not enacted. For example, the HUD-Independent Agencies Fiscal Year 1982 Appropriation bill, H.R 4034, was not signed into law until December 23, 1981, three months into the fiscal year. The result was confusion throughout agencies under this subcommittee's jurisdiction and the demoralization of thousands of employees who faced uncertain futures. It is NFFE's sincere hope that this year the subcommittee will help expedite the appropriations process and recognize the increased needs of the VA, HUD and EPA.

Each of these agencies bear important responsibilities which have steadily increased over the last few years. The Veterans' Administration, for example, has been required to administer benefits to a larger number of eligible veterans. The agency is responsible for providing compensation for service-connected disabilities and death, pensions for veterans and their survivors, education and training assistance and medical care. However, the number of citizens eligible for veterans' assistance has grown to 89.5 million -- 39% of the total U.S. population. It is essential, therefore, that appropriate spending and personnel levels be authorized to effectively and expeditiously fulfill the VA's mission.

The FY '83 budget proposal submitted by the President appears to meet most of the agency's needs. The Veterans' Administration budget justification indicates that the total number of full-time permanent (FTP) positions will increase by approximately 800 positions from FY '82. The Department of Medicine and Surgery (DM&S) is slated to receive an additional 900 FTP positions, however, the Data Management and Telecommunications Department will lose 24 FTP positions and the Department of Veterans' Benefits will lose 139 FTP positions. Nevertheless, the activities slated to lose personnel remain essential to the efficient functioning of the agency. NFFE hopes that the subcommittee will carefully review the mission of these functions and restore the necessary staffing levels.

Reductions in personnel levels within the VA will ultimately harm the agency, and their impact could have negative repercussions for all benefit recipients. In order to reduce work backlogs, the VA will be forced to increase contracting out, thereby further jeopardizing service to eligible veterans. The request for a $2 million authorization for cost-comparison studies within the DM&S is a strong indication of the Administration's intent to rely heavily upon the private sector for services.

The request comes at a time when the Administration is attempting to drastically liberalize the Office of Management and Budget Circular A-76, which governs procurement policy. The draft revision of A-76 would increase contracting out and its inherent abuses by requiring many commercial and industrial type activities to be converted to the private sector. Activities with more than 25 FTEs would undergo a cost comparison unless, in the view of the agency head or deputy, "the results of recent cost-comparisons of like activities, GAO report audit findings, etc., the in-house operation does not have a reasonable expectation of winning the competition and therefore conduct of a cost comparison would not be necessary."

In VA hospitals, for example, virtually every activity aside from top administrative functions and medical treatment would be forcibly contracted out under the revised circular. Pharmaceutical, food, media services, maintenance, medical records processing, storage and distribution, environmental sanitation and keypunching would have to be awarded to private contractors without cost-comparisons since almost all of these functions have fewer than 25 employees at each hospital. Furthermore, those with more than 25 workers could be contracted out without a cost study if the hospital administrator or deputy merely had a "hunch" it could be done cheaper by private industry. The potential for procurement abuses within the VA could increase proportionally and the Government would be forced to bear the additional costs.

Fortunately, Representative Marvin Leath has introduced a bill, H.R. 6315, which would go far in protecting the DM&S from unnecessary contracting out. The legislation would require all activities carried out at a VA medical facility to be performed by Federal employees. However, the administrator would still have the authority to contract out a function if he felt the quality of medical care would be enhanced or if the Administrator determined that the facility would better fulfill its mission. With specific guidelines to establish cost-efficiency standards, and employee protection, VA activities could be protected against arbitrary decisions to solicit contracts for private industry. It is the Federation's hope that this subcommittee will carefully consider Representative Leath's legislative proposal and incorporate its intent into appropriation language. Additionally, by denying the Administration's request for $2 million for cost-comparison studies, the subcommittee could further ensure the protection of quality medical care within the Veterans' Administration.

NFFE is also concerned with maintaining quality performance within the Department of Housing and Urban Development. Personnel working at the agency are responsible for administering programs such as housing and mortgage credit, community planning and development, equal opportunity, research, regulation, insurance, legal and audit services. In addition, the Department is responsible for fulfilling the Administrations' stated commitment to economically and socially viable communities. Yet, despite such responsibilities, the Administration has recommended a large reduction in FTP positions for the Department.

The HUD budget justification indicates a net decrease of 300 FTP positions with the largest decreases in the following areas: Housing programs (-78); Community Planning and Development (-93); Administration (-80); Field Administration (-29). The decrease in personnel is even more drastic when compared to the FY'81 levels. Total FTP appointments are scheduled to drop from 15,122 in FY'81 to 14,000 in FY'83. These numbers could be lower still if a restrictive appropriation freeze is enacted through the First Concurrent Budget Resolution. Unfortunately, the Department is also likely to suffer increased contracting out if such personnel reductions are made. NFFE urges the subcommittee to examine the potential for cost over-runs, contract modifications and contract abuse which will result from personnel reductions throughout the Department of Housing and Urban Development and to take appropriate actions to restore FTP positions.

Many of the Agency budgets submitted by the Administration appear to be wish-lists for private industry. Perhaps the most blatant example of this is the FY'83 budget request for the Environmental Protection Agency which represents an endorsement of the highly controversial agency management of Administrator Anne Gorsuch. Through Ms. Gorsuch's unwillingness to enforce statutory and administrative regulations and through her disruptive personnel policies, the EPA has become both functionally paralyzed and severely demoralized. The Administration's proposed budget would merely aggravate the growing problems and could lead ultimately to the EPA's destruction. NFFE is adamantly opposed to the Administration's request for this agency, and we hope that funding will be restored to at least pre-1982 levels.

The Environmental Protection Agency was created in 1970 to fulfill a national commitment to improve and preserve the environment. Within the last decade, the EPA has been required to oversee air pollution, water pollution, solid waste, radiation and pesticide programs for the entire nation. During the same time, workloads more than doubled. Nevertheless, the Administration is recommending severe cutbacks to personnel levels, rendering the agency virtually ineffective. The proposed budget would eliminate 3,000 positions from FY'81 levels in programs which have already been plagued by high attrition. 2.7% of the agency workforce has left and if this rate remains constant, 32% of the workforce will be gone by the end of the year. As a result, the agency is losing competent, experienced professionals whom the Administration appears unwilling to replace. Should the EPA attempt to restore its necessary staffing levels, it may find such attempts virtually impossible.

Most EPA programs would also be radically cut back under the proposed budget. Compliance, research and operating programs would sustain a reduction of almost 40%. Research and development programs alone would sustain a 50% decrease despite the increase in research necessary each year. Reducing the funding and personnel levels essential to the EPA's mission will set operations back several years and in some cases over a decade. Future start up costs would be prohibitive. Fortunately, it is within the subcommittee's jurisdiction to review the potentially disastrous cutbacks proposed by the Administration and reverse the intent to dismantle the EPA. It is the Federation's hope that funding and personnel will be appropriated to ensure the agency's continued operation.

STATEMENT OF LARRY SILVERMAN, EXECUTIVE DIRECTOR, AMERICAN CLEAN WATER ASSOCIATION

Mr. Chairman, my name is Larry Silverman and I am the Executive Director of the American Clean Water Association (ACWA). I am pleased to testify today on behalf of our organization on the need for the Environmental Protection Agency to continue and enhance its commitment to the training of wastewater treatment plant operators.

I would like to take this opportunity to introduce the other members of the panel. They are professionals in the field of environmental training and have dedicated the better part of their lives to helping produce a competent environmental workforce capable of managing and operating wastewater treatment systems which produce clean water in a cost-effective manner. They will speak form their experiences on the typical problems faced by treatment facilities and suggest how training can help the operators overcome some of these difficulties.

Debbie Horton is the Executive Director of the Utah 109-b training center which is located at the Utah Technical College in Provo, Utah. The center, under Ms. Horton's leadership, has an excellent track record in training treatment plant operators. Ms. Horton is an active member of the National Environmental Training Association, a membership organization promoting the development of a qualified environmental workforce.

Richard Glaser is currently the Director of the Water Quality Program at Ulster Community College in Ulster, New York. He has had extensive experience in the field of training and has written training materials and developed curricula used by several training programs.

The American Clean Water Association is a membership organization composed of individuals in the water and waste management field. Our members come from a variety of professions and disciplines representing business, government, academia, and private, non-profit institutions. ACWA is dedicated to promoting clean water at an affordable cost and we have consistently supported policies and legislation which will reduce water pollution in a cost-effective manner.

Last year, thanks largely to the work of the House and Senate Appropriations Committees, Congress appropriated $2.625 million for the Environmental Protection Agency to implement training programs for sewage treatment plant operators in Fiscal Year 1982. However, the Administration failed to request funds for this purpose in Fiscal Year 1983. We are here to make the case for Congress to include funding for training in the FY 1983 budget.

THE PROBLEM - Continuing Non-Compliance of Municipal Treatment Plants

Today in 1982, ten years after the original enactment of the Clean Water Act and after the expenditure of more than $30 billion on the construction of wastewater treatment facilities, many municipal plants are still unable to produce environmentally safe effluent. Plants all over the country are consistently violating the standards for both conventional and toxic pollutants. The often quoted General Accounting Office report, "Costly Wastewater Treatment Plants Fail to Perform as Expected," indicated that out of a sample of 242 plants in EPA Regions I,V, and IX taken in 1978 and 1979, 87 percent had at least one violation of their discharge permits. 56 percent were in violation for more than half the year, while 31 percent were considered to be in serious violation, meaning they were in non-compliance for four or more consecutive months and exceeded one or more discharge limits by at least 50 percent. EPA statistical reports on plant performance, the GAO study points out, suggest that, at any given time, between 50 and 75 percent of all plants are in violation of their National Pollutant Discharge Elimination System (NPDES) permits. The result of this abysmal performance is deterioration of water quality, reduced fishing, swimming, and other water-related recreation and business opportunities, and increased risk to public health.

Why Are So Many Plants Out of Compliance?

There are a number of reasons for the failure of a sewage treatment plant to meet its permit requirements. They include: (1) inadequate design of the system; (2) problems due to excessive infiltration and inflow of water into the system; (3) problems handling certain industrial wastes; and (4) inadequate operation and maintenance of the facility.

While ACWA has consistently supported measures which would provide accountability for design and construction as well as an effective pretreatment program which would help alleviate some of the operational problems caused by industrial wastes, today we would like to focus on the operation and maintenance problems of treatment plants since they are most likely to be remedied by increased training of plant operators. Several factors can lead to inadequate operation and maintenance of treatment systems. Among them are: (1) an insufficient operation and maintenance budget often times resulting from poor planning or an inadequate user charge scheme; (2) insufficient attention to preventive maintenance; (3) underqualified staff; and (4) lack of operator training.

Training of treatment plant operators will not solve all of these problems nor will it bring every violating plant into compliance. However, at the same time, training will help some plants meet the standards, it will improve water quality in general, and it will lead to more efficient operation of plants. All plants do not suffer from inadequate training, but it is fair to suggest that inadequately trained staffs are present more often than not in plants which are consistently unable to meet their effluent standards. In fact, the GAO specifically cited undertrained personnel as a major reason for the failure of many treatment facilities to operate properly.

Training is Not a Simple Task

Operating, maintaining, and managing a wastewater treatment system is not a simple job. Machinery, equipment, and treatment processes have all become increasingly more sophisticated. Consequently, training involves more than simply telling the operator which lever to pull and which dial to turn. Quality training provides instruction on comprehensive management of the overall treatment system and it helps plant personnel gain a better understanding of how the integral components of the system work together. Good training addresses a number of issues ranging from how to select and implement the proper user charge scheme, to promoting water and energy conservation, to employing preventive maintenance, to applying the treatment chemicals at the correct time.

Just as the operation of treatment plants has grown in sophistication, the training profession has become more sophisticated in its efforts to meet the needs of the operators. Good training materials have been produced on technical operation of plants as well as on financial management of the system. In addition, a number of organizations have developed quality technical assistance and training programs. Examples of such groups are the National Demonstration Water Project, the New Jersey Association of Environmental Commissioners, Virginia Water Project, Maryland Rural Development Corporation, the National Environmental Training Association, the Association of Boards of Certification for Operation Personnel in Water and Wastewater Utilities, the National Association of Sewer Service Companies, the organizations within the Rural Community Assistance Program network, Operating Engineers, Clean Water Fund and others. These groups have all demonstrated the capability to help plant managers and operators do a better job of cleaning up the water in their systems.

Training Makes Economic Sense

Not only does training of wastewater treatment plant operators make environmental sense, but it makes economic sense as well. As I mentioned previously, ACWA has consistently supported the most cost-effective approaches for water and waste management, and our support for training is in line with that tradition. EPA Deputy Administrator, Dr. John Hernandez, has acknowledged the need for training on several occasions. In fact, he stated to this subcommittee last February that it is cost-effective to invest money in the training of sewage treatment plant operators.

Training can help reduce operation and maintenance costs in several ways.

- Training can help operators improve operation and maintenance of expensive equipment. This can extend the life of the equipment thus reducing repair and replacement costs.

- Training can teach operators how to properly apply the chemicals used in the treatment process. This can save money which is often wasted on overapplication of these costly chemicals.

- Training can encourage operators to become more aware of the potential for using energy more efficiently within their systems. Energy represents a considerable portion of the operation and maintenance costs (often as much as 50 percent) for many treatment facilities. Thus energy conservation can lead to substantial savings.

- Training can help operators and community officials promote water conservation within the community as well as within the treatment system. Work in EPA Region V has demonstrated that flow reduction programs can result in considerable savings for communities of all sizes.

- Training in maintenance and repair of collector sewers can produce large savings. The GAO singled out infiltration/inflow problems caused by poor construction and leaky sewers as a major reason for the failure of many treatment facilities to operate properly. A woeful lack of information about the cost effective correction of infiltration/inflow exists in many communities.

- Training can also lead to improved financial management of treatment systems. Helping plant managers employ effective billing procedures and efficient accounting practices can reduce operation and maintenance costs.

- Finally, training can serve as an enforcement tool thus reducing the cost of enforcement activities for EPA, the States, and for municipalities. By enhancing compliance, training can decrease the need for enforcement. In addition, increased emphasis on providing training and technical assistance will change the nature of the relationship between enforcement personnel and the municipalities in a positive way. Rather than threatening enforcement actions against the problem communities, which generally lack the know-how and resources needed to achieve compliance, EPA and the States can approach the community officials in a cooperative problem-solving fashion, recommending technical assistance and training to help them improve the operation of their facilities.

While the payback from certain aspects of training and technical assistance such as savings from proper application of chemicals, from energy conservation, and from correction of infiltration and inflow can occur after a relatively short period of time, it can take a number of years to realize the benefits from preventive maintenance of plant equipment. Nevertheless, we should not underestimate the importance of such long term savings. By adding an extra five years of life on to the plant via maintenance, a community can provide considerable savings to the users of its system. Moreover, the building of a wastewater treatment plant is a long term investment in the protection of our rivers and streams. Likewise, it is only reasonable to expect training to be a long term investment as well. Finally, it is important to recognize that the economic benefits resulting from training are not restricted to problem plants. Even facilities which are in compliance and have been so for a period of time can reduce costs through energy and water conservation, improved maintenance, and better financial management.

Why Federal Involvement?

Most individuals involved in the water pollution control business including EPA and the state regulatory agenicies recognize the need for training and the economic benefits it can provide. The questions are whose responsibility is it to see that training and technical assistance are provided and who should pay?

The Administration suggests that training is a state and local responsibility. Ideally, training should be the responsiblility of local communities. It should be explicitly included in the operation and maintenance costs of the system and paid for through local user fees. However, many municipalities remain unaware of the cost savings and environmental benefits which training can provide or they lack the resources or the political will to pay for it themselves. In addition, most states have been reluctant to give adequate support for training. Although some states such as California, Illinois, and Utah have developed active training and technical assistance programs, most have relegated training to a low priority.

This leaves us with two options. We could totally discontinue federal involvement in and support for training and hope that some day the states and local communities will assume the responsibility. Meanwhile, tons of conventional and toxic pollutants would continue to flow into our waters each day and the American consumers would continue to foot the bill for exorbitant operation and maintenance costs of these improperly operated systems. Or the federal government can continue its support for training.

ACWA strongly feels that EPA should not only continue funding technical assistance and training, but in addition, it should undertake a more active role in promoting these programs. The goal of EPA's training efforts should be to institutionalize training and technical assistance at the state and local levels. Ultimately, we would like to see the local communities assume responsibility for ensuring that their operators receive training. This can only be achieved by educating and informing state officials, mayors, public works directors, operator associations, and citizen groups on the availability and the benefits of training.

This, however, will not occur overnight. The environmental training profession is growing and maturing and it will take time to make the transition to a situation where the communities assume full responsibility for training. There are, however, several steps EPA can take to move toward this objective:

- o EPA officials should speak out publicly on the need for training;
- o the Agency should involve regional compliance officers and innovative/alternative technology coordinators in the oversight of training and technical assistance programs;
- o EPA officials should participate actively in conferences and seminars on training and technical assistance;
- o the agency should aim to strengthen existing training and information networks and work through these networks to demonstrate the value of training;
- o EPA should do a better job of distributing training materials; and
- o the agency should conduct or encourage evaluations of existing training and technical assistance programs.

How Should the EPA Training Money Be Allocated?

We would like to include in the record a copy of recommended guidelines for spending the FY 1982 training money which ACWA submitted to EPA. Briefly, some of our major recommendations include:

- o EPA should channel funds through existing organizations with ongoing programs and good performance records in training and technical assistance.
- o EPA should devote a significant portion of the money to on-the-job training of plant operators and managers. The agency and other organizations have done a good job in the past producing training materials, developing curricula, and assessing the needs for training. It is now time to get the materials and the training to the operators that need assistance.
- o EPA should provide substantial assistance to small communities which generally lack the in-house expertise and resources to carry out technical assistance and training on their own.
- o The agency should provide assistance to organizations which have demonstrated the ability to reduce attrition rates, a major problem within the water and sewer workforce.
- o Given the fact that EPA does not have the resources to fund training programs for the entire country, the agency should attempt to leverage training funds from other federal agencies (ie. the Department of Labor, the Department of Agriculture, and the military), from state agencies, and from private sources. In addition, it should devote most of its resources to demonstration projects in selected regions.

The Public Wants Clean Water

The American people have consistently supported strong water pollution control laws. Last fall, pollster, Lou Harris, found that about 90 percent of the American public opposed weakening the Clean Water Act. Ensuring that municipal wastewater treatment systems work properly and meet their required effluent standards remains a federal responsibility and the public will hold both EPA and Congress accountable. Training of sewage treatment plant operators is an efficient, non-controversial way to help maintain the progress toward cleaning up our waters.

The federal government has spent over $30 billion on construction of wastewater treatment systems during the last ten years and it may spend another $20 to 30 billion by 1990. The American people want to see that investment of their tax dollars protected. Training will help to achieve that end.

American Clean Water Association

RECOMMENDED GUIDELINES FOR SPENDING THE $2.6 MILLION FOR TRAINING AND TECHNICAL ASSISTANCE IN FY 1982

I. The Clean Water Act imposes many training, technology transfer, and technical assistance responsibilities on EPA. This is as it should be. Without adequate training and assistance programs, the nation's wastewater treatment program, particularly in the municipal sector, is likely to fall short of its goals.

II. The need for training of plant operators and technical assistance becomes increasingly apparent as more sewage treatment plants are built. In a number of studies the GAO has found that lack of training of treatment plant operators is one of the principal reasons for the failure of the sewage treatment construction grants program to attain clean water. In addition to inadequate training, the lack of technical assistance to community leaders responsible for sewage treatment decisions accounts for many communities' inability to afford their share of the capital costs, inappropriate technology choices, and unacceptably high operation and maintenance costs.

III. Thanks to the good sense of the House and Senate Appropriations Committees, the EPA has approximately $2.6 million for training and technical assistance in FY 1982. The purpose of this paper is to suggest how that money might best be spent. In general, we suggest the following guidelines:

a. Funds should be channeled through existing organizations with on-going programs and good reputations in the area of training and technical assitance. Examples are the National Demonstration Water Project, New Jersey Association of Environmental Commissioners, Virginia Water Project, Maryland Rural Development Corporation, National Environmental Trainers Association, Association of Boards of Certification for Operation Personnel in Water and Wastewater Utilities, National Association of Sewer Service Companies, the organizations within the Rural Community Assistance Program network, Operating Engineers, and Clean Water Fund.

b. Money should be aimed at strengthening existing training and information networks. Many groups and individuals are investing in the people who man this country's water and sewer facilities. These include community colleges, state universities, contractors, unions, equipment manufacturers, municipal governments, state government, the Extension Service, Soil Conservation Service, the military, charitable institutions, engineers, environmental organizations, and others. Having good working relations with this network should count for a lot, when EPA considers who is to get grants and contracts.

c. Money should go to the areas of greatest need. However, little if any of the $2.6 million should go for identification of needs. EPA has a pretty clear idea of who needs what, as do the people who are the best candidates for EPA support. Funding for future manpower and needs assessment should come out of other portions of EPA's budget. The Department of Labor, the Pentagon, National Science Foundation, Tennessee Valley Authority, and others should contribute to needs assessment. In general, however, trainers should be encouraged to use their own resources to seek out likely trainees.

d. The need for imporved training and technical assistance is especially acute in small communities, which lack in-house expertise and the resources to provide these services for themselves. A major portion of EPA's limited training and technical assistance resources should be devoted to solving rural communities' problems.

e. A significant portion of the $2.6 million should be devoted to "hands-on" training of sewage treatment plant operators and managers. Quite often technical assistance to this group will answer the largest part of a small cummunity's overall water management needs. The ombudsman or circuit rider is one approach to the training problem. Working with a number of communities in a geographical area, a highly skilled individual or team diagnoses the problem at a sewage treatment plant, recommends proper operator procedures, and works with the plant operator to correct the problem. This was one of the options recommended in EPA's "1990 Strategy". The National Demonstration Water Project, Virginia Water Project, Maryland Rural Developemnt Corporation, Mid-West Assistance Project, and other organizations within the Rural Community Assistance network currently perform these services.

f. Aid to community decisionmakers, mayors, councilmen, community organizations, and so forth, should also be an important element of EPA's training and assistance program. Lack of knowlege is the biggest impediment to implementing a wide range of innovative and alternative treatment technologies. A program of technical assistance, especially for smaller communities -- assistance in defining the problem and scope of work, developing guidelines for selecting engineers with experience in solving rural problems in a cost-effective manner, and making technology choices-- could overcome this ignorance, save scarce construction grants funds, and provide opportunities for local self-sufficiency in wastewater treatment. Clean Water Fund, a nonprofit research and educational organization, is beginning such a program in the Great Lake states with private foundation funding.

g. Another need for training exists in the area of collector sewer maintenance and repair, singled out by a recent GAO study as one of the major causes for improperly operating sewage treatment plants. This is not exclusively a big city problem, nor is it confined to old systems, According to Mike Bonk, a Washington Suburban Sanitary Commission expert on infiltration/inflow, poor construction practices and lack of effective inspection mean that brand new sewers are often the leakiest. A woeful lack of information about cost-effective correction of infiltration/inflow problems exists in many communities of all sizes. The Tennessee Valley Authority and the National Association of Sewer Service Companies have both performed well in this area.

h. High attrition rates are one of the most serious ills of the sewage and water work force. Organizations with a demonstrated ability to reduce rates of attrition merit EPA support. Dr. Hernandez has drawn attention to the attrition problem many times. The Association of Boards of Certification has an excellent track record in this area. It should receive EPA assistance.

i. $2.6 million is not enough money to reach the entire nation. For the time being, EPA should devote most of its available resources to demonstration projects in selected regions.

j. EPA should raise training funds and resources from other agencies. Mr. Cahill's Office of Federal Facilities should be instructed to exact at least $2.5 million from the Department of Labor. Commitments should be obtained from the Department of Agriculture. Planning should begin for joint programs with the military, Agency for International Development, and the Indian Health Service.

k. Regional compliance officers and innovative/alternative technology coordinators should help oversee training programs. Compliance officers and technology coordinators should be vitally concerned with improving operator skills and raising the level of understanding of technology choices. Making these people a formal part of the training program should aid them in carrying out their present responsibilities.

l. All grants and contracts in training should contain a component for evaluation and future planning.

m. EPA should establish an advisory committee on training and technology transfer composed of leaders from many sectors of the economy. We would be pleased to suggest candidates and to serve on such a committee ourselves.

n. EPA should take additional steps to enhance training. EPA officials should participate actively in conferences and seminars held by outside groups on training and technology of transfer issues. The Administrator and Deputy Administrators should speak out on the need for training. EPA should do a better job distributing training materials. Where the Agency can't afford to print or distribute materials it should encourage the private sector to do so.

STATEMENT OF DAVID BRETZKE, PRESIDENT, RURAL WATER ASSOCIATION OF UTAH

Mr. Chairman, my name is David Bretzke. I am the Executive Director of the Grand County Water Conservancy District and the Executive Director of the Spanish Valley Water and Sewer Improvement District in Moab, Utah. I also serve as the President of the Rural Water Association of Utah and as a Director for the National Rural Water Association.

Mr. Chairman, thank you very much for the opportunity to speak with you and the other members of the Committee about an issue of great concern to small water systems throughout Utah and other western states. Over the past two years we have been operating a grassroots training and technical assistance program for small water systems which was part of the EPA budget under their Safe Drinking Water Act program. We value this program and we seek your assistance in having it continue.

One of our chief concerns in Utah is for the provision of a safe and assured source of drinking water for our citizens. We believe that this is essential for the physical and economic well-being of our state and the nation. In 1974, the United States Congress passed the Safe Drinking Water Act which was designed to further this aim.

The enactment of the Safe Drinking Water Act brought on special problems for small community and rural water systems. On one hand they were faced with complying with a Congressionally mandated and Environmental Protection Agency monitored law. On the other hand, many small water systems lacked the financial resources and the trained operators needed in order to bring themselves into compliance with this law. EPA estimated that approximately 80 percent of the 65,000 community water systems throughout the nation served populations of under 2,500 persons. EPA also estimated that the great majority of violations of the Safe Drinking Water Act would come from these small systems.

We have certainly found this to be the case in Utah where some 86 percent of the community drinking water systems serve populations of under 5,000. It is in these systems where virtually all of our drinking water violations in FY 81 occurred. A recent report by the General Accounting Office indicated that in FY 80, there were nearly 150,000 drinking water violations nationwide, again mostly in these small systems.

The dimensions of the small system compliance problem seem overwhelming, but instead of giving up or adopting a defensive attitude towards our state health department or the EPA, we have taken another approach. In 31 states, rural water people have banded together to operate rural water associations. Many members of these associations are members of the very systems who have the greatest safe drinking water compliance problems, and who have initiated this unique approach in order to bring their systems up to Federal standards.

Each state association is overseen by a President and a board of directors made up of representatives from small systems throughout the state. These individuals donate their time to the association and hire and oversee a state association program manager and office secretary. The program manager, who must have a background in rural water, conducts at least 12 operator training workshops each year at diverse geographic locations around the state. At these workshops, water operators receive training and instruction in the basics of small water system operation, maintenance and water quality testing. In addition, the program manager conducts follow-up on-site technical assistance visits to water systems to assist water operators with specific problems.

I believe that the success of this approach may be seen in the statistics compiled by the National Rural Water Association from January 1, 1981 through February of 1982. During this period some 361 rural water workshops were held by our state associations. A total of 12,120 rural water operators attended these workshops from 5,211 rural water systems. There were over 8,500 on-site technical assistance visits to improve water quality, of which 3,033 were made for helping meet specific Safe Drinking Water Act Compliance requirements. Our state association in Utah is one of the newest participants in the National Rural Water Association program. Despite our recent start, from June 1, 1981 through March of 1982 we conducted a total of 13 workshops attended by 240 rural water operators representing 99 systems. We also made a total of 153 on-site technical assistance visits throughout Utah.

Statistics, however, can never give the full picture of the degree of cooperation engendered by rural water associations among the rural water systems themselves and with state and Federal drinking water regulatory agencies. Indeed, it is by increasing small system awareness with the Safe Drinking Water Act and encouraging subsequent compliance that is perhaps the greatest achievement of this program. This approach has avoided the traditional conflict between the regulators and the regulated and has replaced it with a cooperative effort within each state to work together to meet Federal law. In addition, systems have been improved through more efficient use of material and equipment rather than the former practice of simply increasing capital expenditures to solve environmental problems.

The National Rural Water Association training and technical assistance program has been an innovative part of the United States Environmental Protection Agency's Office of Drinking Water program. It has been cost effective and has met priority Congressional objectives. We have been informed that no funds have been requested for FY 83 for the program because EPA hopes that states will eventually pick up the program. This is not the case. I would respectfully urge the subcommittee to give its closest consideration towards restoring the funds for this important program that has played such a significant role in the effective implementation of the Safe Drinking Water Act.

STATEMENT OF THEODORE C. POPE, JR., MANAGER, WATER OPERATIONS, ORLANDO (FLA.) UTILITY COMMISSION, ON BEHALF OF THE AMERICAN WATER WORKS ASSOCIATION RESEARCH FOUNDATION

In behalf of the AWWA Research Foundation and its national membership I appreciate the opportunity to officially deliver this statement to the Subcommittee for consideration as the EPA appropriation is being reviewed. Besides being the Manager of Water Utilities in Orlando I am the Chairman of the AWWA Research Foundation which represents the collective research interest of approximately 4000 water supply utilities and other organizations throughout the United States. In that respect I address the Subcommittee not only from the perspective of one of the people on the firing-line but also as spokesman for the industry which provides drinking water to the great majority of Americans.

As the Subcommittee considers the appropriation of funds to the Environmental Protection Agency, there is but one aspect of the Agency's budget that we wish to address: drinking water research and development. The Administration proposes a decrease of almost five and a half million dollars in the 1983 fiscal year budget as compared to the 1982 appropriation. That's a 19 percent reduction in a line item that by all rights cries out for an increase. However, my plea is not about a matter of five million dollars; it is rather a matter of perspective on the state of the nation's drinking water and the needs of tens of thousands of municipal water utilities and the best interests of American consumers. I am concerned about the Administration's understanding of the role of the federal government in protecting the public health and safety and its grasp of the present situation in the drinking water industry.

I would first like to put this research budget into some type of perspective. The approximately $23 million requested represents a federal government investment of about $0.10 per year for each person in the U.S. The government water supply research expenditures in the Netherlands and Switzerland amount to, respectively, $0.15 and $0.19 per capita. If this were translated to the U.S. it would mean an equivalent funding effort of between $35 and $45 million. This is a considerable increase over the administration's budget request but even it doesn't tell the whole story. Both of these comparatively small countries do not have the water quality variations and complexities that we experience in this vast land. For instance, Switzerland's source of supply, for the most part, is the pristine and abundant snow-melt from the Alps. In the Netherlands, there is a companion research effort mounted by the water industry that is four times larger than the government's effort; thus, the government's research can be concentrated in a few specific areas. When these factors are taken into consideration, a U.S. federal research effort of $100 million does not seem unreasonable or out of proportion to our European counterparts.

The federal government, primarily EPA, and the water supply industry share in the responsibility for providing a safe and wholesome water to the citizens of the U.S. Each party has a critical role to fill and if properly managed, a firm partnership will benefit all. The water utilities' role is to produce and deliver a water which does not jeopardize the public health. The federal government role is to investigate the health implications of the contaminants that we are constantly detecting in our drinking water. Without this basic information no one, neither the water suppliers nor EPA, can justify additional expenditures to further purify our drinking water.

We in the industry are not convinced that contaminants that have to be measured in parts per billion and parts per trillion constitute a significant threat to public health. We deplore alarming the public when there is no scientific basis for concern. On the other hand, we are more concerned than EPA about the potential health effects of these trace contaminants. However, words such as "potential" and "likely to cause" and "suspected" are not enough to justify the expenditure of millions of dollars in this or any economy. Those concerns must be substantiated and the only way to do that is through research.

We are concerned about the decrease in health effects research because it means that we are not expanding our base of knowledge, and our need for more data is beyond question. Also, we are concerned that this reduction will not affect the regulatory process at EPA but that it will proceed at its previous pace without the benefit of substantiating research. A specific case in point was the Agency's attempt to require granular activated carbon treatment for all "vulnerable" water systems in the U.S. This proposed regulation had no basis in fact, was badly written, and was accompanied by cries of "carcinogenic substances" and "insurance policy". These phrases and slogans were used to justify the proposed regulation instead of scientific evidence.

In short, we are concerned that regulation development will proceed without the substantiating research needed to confirm the Agency's concerns. We feel that we are justified in our fear of regulations based upon dubious data because of the past and present actions at EPA. For instance, three of the five top priority items in the Office of Drinking Water's budget plan for FY83 relate to "revised drinking water standards", "standards for unregulated contaminants", and "health advisory activities". A logical question is: On what basis will these new and revised standards be set?

Specifically, we recommend that an additional $5,000,000 be added to the research budget and that it be earmarked for basic health effects research. The proposed increase would raise the research level back to the FY82 appropriation and would provide the necessary minimum of continuing support to those activities that are the basis for all of the water supply efforts in the U.S. We in the water industry stand ready to support and resolve any substantiated problem with our water, but we also stand ready to oppose any unjustified attack on the capabilities of municipal utilities or the quality of their product.

The water industry has no expertise in health effects research -- in animal testing and epidemiological studies. If the federal government reduces its effort in this area, there is no one to fill the gap. If EPA's laboratory facilities and scientific staff are reduced, the loss of continuity and expertise will be severe, for it cannot be easily recovered in some future year. We strongly urge the Subcommittee not to let this happen. EPA's health effects effort has not been able to keep pace with the developments of recent years; to cut it now, while the dimensions of the problem are expanding, is shortsighted and potentially dangerous.

The issues associated with drinking water contamination cannot be put in a fiscal deep-freeze while we struggle with the national economy. Tomorrow's price tag will be much higher than today's -- in terms of dollars and public health. The water industry's concern about health effects research does not arise from any narrow self-interest; it is rather a genuine concern for the public welfare and the social and economic cost of curtailing this essential federal activity.

In addition to the relatively new problem of organic chemical contamination, many communities still struggle with microbiological contamination, both in their water sources and in their distribution systems. Certain strains of bacteria -- Giardia lamblia, for example -- escape the disinfection methods employed in conventional water treatment. The monitoring requirements of the Safe Drinking Water Act have revealed that a significant number of small communities exceed the Maximum Contaminants Level for coliform bacteria. Many small water systems are simply not equipped to achieve the existing drinking water standards for organic and inorganic contaminants. The prospect of future regulations that embrace a variety of organic compounds raises serious if not impossible problems for thousands of small comunities. We do not have treatment technologies that are within the economic capacity of those water systems. That is another important challenge for research and study -- not only cost-effective technologies but also legal, financial and institutional solutions.

Larger water systems are also beset by major and complex problems. Deteriorating distribution systems are a fact in a number of older cities and local officials are understandably staggered at the thought of having to dig up and replace many miles of mains and pipes. In many areas of the country, drought threatens water quality as well as quantity. And all the while, operational costs continue to spiral.

In all these matters, research holds the key to feasible solutions. Without an appropriate level of research, there will be no solutions, no progress. The water utilities of this country are truly expert in the conventional treatment modes that gave us the reputation of having the best and safest drinking water in the world. However, the problems and challenges that have emerged during the last decade or so, and the general advances in science and technology, are creating gaps between what we know about the contaminants in drinking water and the significance of those contaminants. Only a vigorous research program can help us keep up and move ahead to an adequate level of response to the range of issues confronting us.

The water industry applauded the following statement in the July, 1981, Senate Appropriations Committee report.

> "The Committee emphasizes the partnership between government and industry that is implicit in the Safe Drinking Water Act and directs EPA to work more closely with the water industry toward the improvement of water service throughout the country. In the research program in particular, it is important that a portion of the Federal investment respond to municipal water industry priorities and require substantial cost-sharing (e.g., 25% or more of the cost) by water suppliers. The Committee's intent here is to stimulate the growth of a nationally coordinated industry research effort and to recognize that water service, although it includes compliance with regulatory requirements, embraces a wide range of issues and practical problems, the solutions to which merit public interest and support. The data and technologies developed should be systematically disseminated through the best means available including the use of industry channels so that many communities may share the benefits of the research effort."

The water industry was eager to respond to this challenge and saw your directive as the first step in forming a solid research partnership with EPA. In fact, for the first time the industry contributed funds to the AWWA Research Foundation for the purpose of expanding the industry's own research program and cooperating with EPA in joint efforts. Unfortunately, no one at EPA read the directive or if they did, they didn't take it seriously.

Our numerous attempts to secure a joint research effort with EPA in which we proposed substantial cost sharing by the industry, and in one instance proposed a comprehensive technology transfer system as mentioned by this Subcommittee, have been rebuffed with the simple statement that the proposal doesn't fit into the Agency's priorities. The Subcommittee's directive was ignored even when it was explicitly and repeatedly brought to the Agency's attention. It is quite obvious that "municipal water industry priorities" are not going to be researched unless they just happen to coincide with the regulatory agency's priorities. Therefore, we request that the Subcommittee repeat its directive, perhaps in more specific and stronger language, or consider "earmarking" a portion of the EPA budget for industry priorities. A $2 million earmark would only represent 8.7 percent of the existing EPA budget request and would allow us at the Research Foundation to provide a greater than 30 percent matching funding level for joint projects.

To restate the three principal points:

- Health effects research is a large and critical need which is a responsibility of the federal government; the appropriation for this purpose should, we believe, maintain or increase the funding level of previous years.
- The water industry is confronted by a multiplicity of problems with both health and economic implications; here, too, research is a necessary and wise investment.
- EPA has failed to respond to the subtle directive to research water industry priorities and we request the directive be repeated or that $2 million be earmarked for this purpose.

As the Subcommittee formulates its bill for presentation to the Senate, we ask you to give proper weight to the need of maintaining a strong program of drinking water research. No community water utility in the country is beyond the need of improvement. And there can be no improvements without research.

STATEMENT OF ROBERT KATZMAN, M.D., PROFESSOR AND CHAIRMAN OF NEUROLOGY, ALBERT EINSTEIN COLLEGE OF MEDICINE

Mr. Chairman and members of the Committee: I am a physician, a neurologist and gerontologist involved in investigation of diseases of the brain that affect older individuals. I am not associated with or on the staff of the Veterans Administration hospital. I am, however, a member of the Geriatric and Gerontology Advisory Committee of the Veterans Administration and based upon my experience with this Committee I have asked to testify on behalf of an increase in research support for the Veterans Administration. This need is not only humanitarian in a broader sense but becomes an economic necessity when the crushing fiscal burden of caring for an aging veteran population in the next ten to twenty years is considered.

I am also a World War II veteran. I know that the average age of my fellow World War II veteran is in the early 60's and by 1990 will be in the 70's and by the year 2000 in the 80's. When individuals in our society reach their 70's and 80's there is a sharp increase in occurrence of chronic diseases including heart and lung diseases, cataracts, arthritis, fractures of femurs, prostatic hypertrophy, and cancer. But perhaps most devastating in the older population are those individuals representating as much as one-fourth of the individuals past the age of 80 who have a disabling disease of the nervous system which impairs their ability to function, to communicate, and leads to the majority of admissions to nursing homes. These diseases include Parkinson's disease, and stroke but especially Alzheimer's disease, the latter now being recognized as a major cause of dementia or senility, and the major reason for nursing home placements.

The Veterans Administration currently has about 10,000 extended care beds and another 7,000 nursing home beds. According to demographic projections from present nursing home utilization rates, by the year 2000 the need to care for the World War II veteran population in nursing homes would require building another 170,000 extended care or nursing home beds. It is unlikely that civilian facilities will be able to care for all of these veterans, since Medicare does not pay for chronic disease care and there will certainly be a demand by the veterans to avoid becoming paupers dependent on Medicaid. If the Veterans Administration were to try to build such beds the costs would be enormous.

Yet there is hope. Hope that through research into the prevention, cause, and management of these chronic diseases, especially stroke, Parkinson's and Alzheimer's disease, the need for care may be reduced. Medical advances have already made major inroads into reducing the incidence of cerebral vascular disease, that is stroke, which has decreased by over 50% in the past fifteen years. The Veterans Administration has made a significant contribution to this major public health advance through its collaborative research studies as well as by its individual investigators. Treatment of Parkinson's disease has been greatly improved with such drugs as L-DOPA and new directly acting dopamine agonists recently available for this disorder. Again, the Veterans Administration has played a role in Parkinson research. There has been a realization within the Veterans Administration of the importance of tackling Alzheimer's disease. There are now beginning discoveries in regard to the biochemical changes (e.g., the loss of the enzyme choline acetyltransferase) and the pathological changes in the brains of Alzheimer's patients and beginning studies of rational specific medications for managing such individuals. These findings hold promise for the future.

I have had the opportunity of site visiting all of the GRECC units in the V.A. and there is certainly a major focus upon such research within these GRECC's as well as within other Veterans Administration hospitals. The total sum spent on such research in the V.A., even in the current atmosphere of budget austerity, are relatively small and an increment in the Veterans Administration appropriation of 15 or 20 million dollars to encourage such research as compared to the literally billions of dollars that might be needed for chronic care within the next two decades would be monies very well spent and beneficial to the Veterans Administration and to society as a whole.

STATEMENT OF THE NATIONAL FIRE PROTECTION ASSOCIATION

The National Fire Protection Association (NFPA) strongly supports the continuation of the United States Fire Administration and requests this Committee's serious consideration of efforts to see that the Federal focus on fire is not abolished.

The NFPA, since its inception before the turn of the Century, has been looked upon as the Nation's public advocate for fire safety. In this role, the Association was an active participant in the National Commission on Fire Prevention and Control, which produced the report "America Burning" that lead to the establishment of what is today the United States Fire Administration. The NFPA has followed closely the activities of this agency and has, from time-to-time, provided constructive testimony at authorization and appropriation hearings regarding the accomplishments of the United States Fire Administration. The United States Fire Administration has evolved into an important asset assisting State and local government and the private sector in increasingly effective efforts to resolve the Nation's fire problems.

May I call to the Committee's attention just one example of effective programs of the United States Fire Administration. The United States Fire Administration, working in close harmony with manufacturers, other associations, local fire departments, and other interests, successfully evaluated the concept of fast acting residential sprinkler systems. As a result of this joint effort, today we have available on the market for the first time, a fast acting sprinkler head which will revolutionize the fire protection available for our homes. As a result of this effort, data collected through this evaluation has been incorporated in the National Fire Protection Association's most recent standard for the installation of residential sprinkler systems, thus, making available to all our citizens a national standard for this greatly improved protection method.

The continuation of coordinated efforts such as this with State and local governments and the private sector are necessary if this Nation is seriously interested in reducing its current world-wide unreasonably highly disproportionate lead in fire deaths and property loss.

The NFPA requests that this Committee give consideration to whatever steps are necessary to see that the United States Fire Administration, as an identifiable focal point at the Federal level for fire loss reduction programs, be maintained.

STATEMENT OF HARLYN O. HALVORSON, PH.D., CHAIRMAN, PUBLIC AND SCIENTIFIC AFFAIRS BOARD, AMERICAN SOCIETY FOR MICROBIOLOGY

The Public and Scientific Affairs Board (PSAB) of the American Society for Microbiology (ASM) wishes to submit the following comments on the fiscal year 1983 budget for the National Science Foundation (NSF) for the hearing record and consideration of the Senate Subcommittee on Appropriations for HUD-Independent Agencies.

The American Society for Microbiology is the largest single life science organization in the world with an active membership of over 29,000. Members of the ASM contribute to the public good in many practical and diverse ways. Among these are the protection against infection in both man and animals as well as enhancement of food production and control of fermentation processes required by industry. Fully as important are the contributions made as a result of basic microbiological research. For example, the public sector is presently beginning to reap the rewards of earlier fundamental investigations in genetics that led to gene splicing which has provided the basis for the rapidly growing industry of biotechnology.

The National Science Foundation has a profound impact on science and technology in the United States because it supports a major portion of the country's basic and applied research. The only agency with a mandate for basic research, the NSF has a primary responsibility for the development of many scientific disciplines which in turn support mission agencies. Science education and science research are mutually supportive, and the NSF has had a long, successful history in promoting the effective interfacing of education and research to the benefit of the American people. Although the Public and Scientific Affairs Board (PSAB) supports and encourages all areas of science and science education funded by the National Science Foundation, we would like to focus our remarks on NSF funding for the biological sciences.

The Administration has proposed a level of spending of about $152 million for research in the biological sciences in its proposed fiscal year 1983 budget for the National Science Foundation. Although this amount represents an increase over fiscal year 1982 of approximately 7%, it cannot be considered a real increase when one takes into account the estimated general inflation rate for 1983 of around 7%. In our opinion, the proposed fiscal year 1983 budget for biology programs at NSF is conservative and is insufficient to do more than maintain a level effort of research in biology. Indeed, many excellent research proposals currently are being rejected for lack of money. The House Committee on Science and Technology dealt a serious blow to biology programs this year when it redirected approximately $4 million from biological sciences to the social, behavioral and information sciences. This will compromise NSF's effort to pursue the research on molecular genetics which is so essential to progress in the newly developing biotechnology industry of genetic engineering.

The Biological, Behavioral and Social Sciences Directorate of the National Science Foundation supports a significant amount of the research done in the United States on basic mechanisms of cells and the molecular basis of life. It supports about 90% of the basic environmental biology research at colleges and universities. The NSF biological sciences program has contributed to a better understanding of the structure, function and regulation of genes and the use of gene transfer techniques for the potential improvement of economically important plants. The program has generated new knowledge from biochemical, cellular and physiological research in the plant sciences, specifically in the area of photosynthesis and nitrogen fixation and plant resistance to stress. Genetic engineering techniques are being developed which may lead to increased food production for the world. Studies in the utilization of biological systems and biomass conversion for the production of chemical materials promise alternate domestic sources of energy and critical materials of biological origin in the future. NSF's role in supporting fundamental research in molecular biology is crucial to the rapid development of biotechnology which may strengthen our economy. In the area of environmental biology, NSF is sponsoring ecological research to understand the long-term functional interaction of large-scale ecological systems and the effects of environmental stress. There is ongoing research of biogeochemical cycling and ecosystem dynamics, especially those related to global carbon dynamics, tropical forest systems and acid rain.

An indication of the underfunding problem of biology programs by the National Science Foundation, especially in the Physiology, Cellular and Molecular Biology Division, is the dramatic decrease in the percentage of total awards that are funded that are new awards. Although there has been some degree of stability in the funding of continuing awards, new grants are declining in numbers to an alarming extent. They have decreased from 66% of total awards in 1978 to a projected 43% of total awards in 1982. Under the proposed budget, this fraction can be counted on to decline even more. In part this is because of inflationary pressure on biological research, which surpasses inflation at large. Although there is every reason for continuing to fund applications for ongoing work, the consequences of not funding new grants can be disastrous. New grants represent to a large extent the efforts of new and younger investigators. Lack of funds for young, vigorous, innovative investigators will lead to stagnation of scientific advances and to a loss of a generation of scientists. The useful scientific life expectancy of a scientist is very short. Thus the impact of the current situation will be felt soon.

The House Committee on Science and Technology has reduced the small margin of increase for biology programs by $4 million in an effort to increase other meritorious programs in the NSF budget. This reduction for biology, in a stand-still budget, will result specifically in the loss of approximately 80 awards, based on an average award of $50,000. In addition to molecular biology, the loss of $4 million will impact on the plant sciences, an area of enormous importance for food production, energy utilization by photosynthesis, nitrogen fixation and plant diseases. These areas have not been popular with either the National Institutes of Health or the U.S. Department of Agriculture and have been underfunded until NSF decided to support them. Much research will be lost in 1983 and there will be a serious deficiency in these vital areas. A second area of great potential value concerns the genetics of unusual microrganisms used in the industrial fermentation and environmental programs. Although we are sympathetic with the need to fund excellent research in all areas of science, we strongly recommend that funds for worthy programs be added to the NSF budget rather than redirected from the biological sciences.

The Public and Scientific Affairs Board of the American Society for Microbiology appreciates the opportunity to express its views and stands ready to provide additional information.

STATEMENT OF THE INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS, AFL-CIO-CLC

This is to present the views of the International Association of Fire Fighters (IAFF), AFL-CIO-CLC, which represents approximately 175,000 professional fire fighters throughout the United States and Canada, on fiscal year 1983 appropriations for the U.S. Fire Administration (USFA).

The IAFF has taken a strong and active interest in the creation and development of the U.S. Fire Administration and its various programs. In 1969, when the Federal government first turned its attention to our serious national fire problem and appointed a National Commission on Fire Prevention and Control, then-IAFF President Howard McClennan was privileged to serve as its Vice-Chairman.

The Commission's findings at that time led to one conclusion, "that we needed Federal leadership and assistance to keep fire prevention and control abreast of modern demands on the fire services, if the magnitude of losses to fire, in life and property, experienced in the United States were to be reduced." In 1974, the Congress responded to the Commission's findings and the crying national need by enacting the National Fire Prevention and Control Act, which envisioned a comprehensive Federal program, administered through the U.S . Fire Administration, working in cooperation with and in support of State and local fire programs.

As part of a general government re-organization, in 1978 the U.S. Fire Administration was taken from under the jurisdiction of the Department of Commerce and incorporated into the newly-created Federal Emergency Management Agency (FEMA). The IAFF actively supported that re-organization, since it allowed for improved response to all types of emergencies, including fire, through comprehensive planning and the coordination of all available emergency response resources.

Today, we are extremely disturbed to find that FEMA, which we helped to create, is now recommending the elimination of the U.S. Fire Administration, a key component of that Agency. We are pleased to see that the Administration suggests that many of the fire problems that had been addressed in the Commission's report, America Burning, have been somewhat improved over the years, and certainly with the assistance of the USFA.

However, we think it quite facetious to suggest that the American fire problem has been corrected to the point of justifying the elimination of the USFA and the essential Federal fire program it represents. We are not alone in this view and reaction among the entire fire community to the proposed elimination of the USFA has been overwhelmingly negative. Furthermore, the USFA has received support in the U.S. Senate, where the Senate Commerce, Science and Transportation Committee has mandated $20 million for the continuation of the USFA as part of that Committee's fiscal year 1983 NASA authorization measure.

We would like, now, to address the remainder of our comments to the U.S. Fire Administration, itself, and to its various programs. With the U.S. continuing to experience one of the highest rates of fire death and property loss (with the resulting loss of jobs, productivity, etc.) among industrialized nations, the need for Federal focus and assistance remains strong. We are in support of the USFA's original request for fiscal year 1983 funding, but we must stress that it is the absolute minimum essential funding level if the Federal fire program is to reduce the losses in life and property to fire experienced in the United States.

The U.S. Fire Administration has had three main program directions: education and training; a natioanl fire data center; and research and development in fire sciences and engineering. We would like to make several specific recommendations touching on these areas.

In the area of education and training, significant strides have been made since the opening of the National Fire Academy. The establishment of a National Fire Academy had long been one of the major goals of the IAFF. The Academy, with resident capacity of 300-500 students and space to accomodate conferences of up to 1,000 people, serves as a focal point for upgrading fire fighting capabilities through the country. Selected individuals representing fire fighters, fire chiefs and marshalls, code enforcement organizations, architects, arson detection units, and other fire-related professionals are being trained in the most advanced techniques of fire prevention and control. These experts will then share this information, passing their knowledge on to colleagues throughout the country.

The IAFF has been gratified to see the National Fire Academy's progess towards meeting its goals, through its completion of an integrated curriculum built around two primary program areas -- Fire Protection Management and Fire Service Technology -- and through an expansion and refinement of the "train-the-trainer" concept, by requiring educational methodology courses.

The National Fire Academy is the only program of its kind, offering comprehensive training to all fire-related personnel. Only through such a program can we hope to make the major strides in the education and training of fire-related personnel needed to significantly reduce fire deaths, injuries and property losses in the United States. We would hope that the Subcommittee will continue to support this program and provide sufificient funds for its continued progress.

One program within the area of education and training which is specifically geared toward the working fire fighter and in which the IAFF takes a particular interest is the Open Learning Fire Service Program. This program is a higher education project which provides access to a college education to all fire service personnel in this country. The project is run in conjunction with selected colleges and universities, offering a quality education to students and awarding credits and college degrees from accredited institutions in fire administration and fire prevention technology.

Since its inception in 1977, the Open Learning program, which falls within the National Fire Academy, has been highly successful in attaining its stated goals, and has done so in a most cost-efficient manner. We would like to point out that students registering for the program do not receive any Federal subsidies for their education, but are highly motivated and pay their own way.

All Open Learning proposals have consistently been approved by officials of the National Fire Academy and the USFA, and through this cooperation we have witnessed the flowering of the program, with eight courses being offered to over 900 registrants by nine accredited colleges and universities throughout the country. The Open Learning program calls for the development of twelve three credit hour courses in the areas of Fire Prevention Technology and Fire Administration. The original and all subsequent grant proposals have called for the development of at least two courses per year, so that registered students would not experience a delay in their progress.

Continued support for this USFA/National Fire Academy program is absolutely essential so that the minimum number of courses -- twelve -- which have been promised to the universities can be developed. Without the minimum twelve courses, all students who have started the program will be left out in the lurch; and institutions that have begun introducing the new curriculum will be forced to reverse and stop their efforts.

In order to attain this goal, an estimated $450,000 will be needed in fiscal year 1983. We would strongly recommend that the Subcommittee address this program specifically in any of its deliberations, and we would hope that you would see fit to specifically provide the requested funds in any appropriations for the U.S. Fire Administration.

In our view, research and development is one of the most important programmatic areas within the U.S. Fire Administration. As you are aware, fire fighting is the nation's most hazardous occupation, with the highest line-of-duty death, injury and illness rates. The Firefighters' Integrated Response Equipment System Project (Project FIRES), initiated in cooperation with NASA, is an example of the progress that has been made in this area of research.

This project was designed to develop improved and lighter-weight personal protective clothing and equipment for the fire service, a massive program that has thus far been successful. Nevertheless, we must stress the absolute necessity of funding not only for the continuation, but also for the expansion, of fire fighter occupational safety and health programs and the development and evaluation of personal protective clothing and equipment, if the unacceptable death, injury and illness rates among fire fighters are to be reduced.

We have several recommendations to make in this area. The first and most important is that there is a need to create a Fire Fighter Health and Safety Center within the U.S. Fire Administration. No such center or department was created by the Federal Fire Prevention and Control Act of 1974, hence the budgetary needs of current projects are met by taking funds from other programs within the USFA. The current safety and health staff of USFA consists of one permanent employee who directs the USFA's entire program on fire fighter health, safety and technology. Actual projects are then programmed out to outside contractors. This procedure should be changed to build competence and experience in-house. In addition, the experienced personnel in other agencies such as the National Institute for Occupational Safety and Health, should be borrowed upon and utilized so as not to cause any duplication of effort within the Federal bureaucracy.

The work of Project FIRES must be continued and expanded. While the project has developed and is currently testing model protective clothing in the field, research efforts toward developing a model breathing apparatus should be advanced, directing efforts toward the development of lighter, longer-lasting apparatus and improving audio-visual capabilities and fit of face masks. Especially important is the continuation of the joint USFA/Bureau of Mines project to develop and test close-circuit breathing apparatus. Further, research and development of specialized protective clothing to deal with exposure to toxic substances and chemicals is needed.

Other fire fighter occupational health and safety research priorities are: development of a standardized medical protocol for the treatment of injured fire fighters, so that all fire fighters might receive the highest quality medical care possible, when they are injured; and research and development of improved equipment, such as ladders and ropes, so that problems and and tragedies resulting from breaking ladders and ropes can be eliminated. Furthermore, little has been done in terms of researching the impacts, dangers and possible protection of fire fighters from burning plastics, exposure to carcinogens and other toxic substances and chemicals.

While we have emphasized only some of the programs within the U.S. Fire Administration in our statement, we are not suggesting a lack of support for the continuation of its various other fire prevention and control efforts. As we have stated, we are in overall support of the U.S. Fire Administration's original fiscal year 1983 request, and we would hope that the Subcommittee would provide adequate funding to assure the continuation of the U.S. Fire Administration and to assure that its essential programs be maintained.

LETTER FROM WILLIAM J. HOULE, CHAIRMAN, FOND DU LAC RESERVATION BUSINESS COMMITTEE AND HAROLD DIVER, CHAIRMAN, FOND DU LAC RESERVATION HOUSING AUTHORITY

FEBRUARY 26, 1982.

Re Indian housing programs.

Hon. JAKE GARN,
Chairman, Appropriations Subcommittee on HUD–Independent Agencies, U.S. Senate, Washington, D.C.

DEAR SENATOR GARN: The Fond du Lac R.B.C. and the Fond du Lac Reservation Housing Authority respectfully submit the enclosed statement of President Reagan's elimination of the Indian Housing Program. We request that our statement be made a part of the official record of the hearing on Fiscal Year 1982 and zero budget for FY 83 Indian Housing Program Budget Rescission scheduled to be heard on March 1 and 4, 1982. The continuing need of Indian people for decent and safe housing and the lack of any alternatives for Indian people to the Indian Housing Programs, means we must vehemently object to the President's Budget Rescission. The people of the Fond du Lac Reservation have worked hard to establish a Housing Program that will help them to achieve decent and safe homes for themselves and their descendants and are frustrated and angry at seeing their hopes for the present and future taken from them by the President's budget rescissions.

Respectfully submitted,

WILLIAM J. HOULE,
Chairman, Fond du Lac R.B.C.
HAROLD DIVER,
Chairman, Fond du Lac R.H.A.

CONCLUSION OF HEARINGS

Senator D'AMATO. That concludes the hearings. The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 2:45 p.m. Tuesday, May 25, the hearings were concluded and the subcommittee was recessed to reconvene at the call of the Chair.]

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